

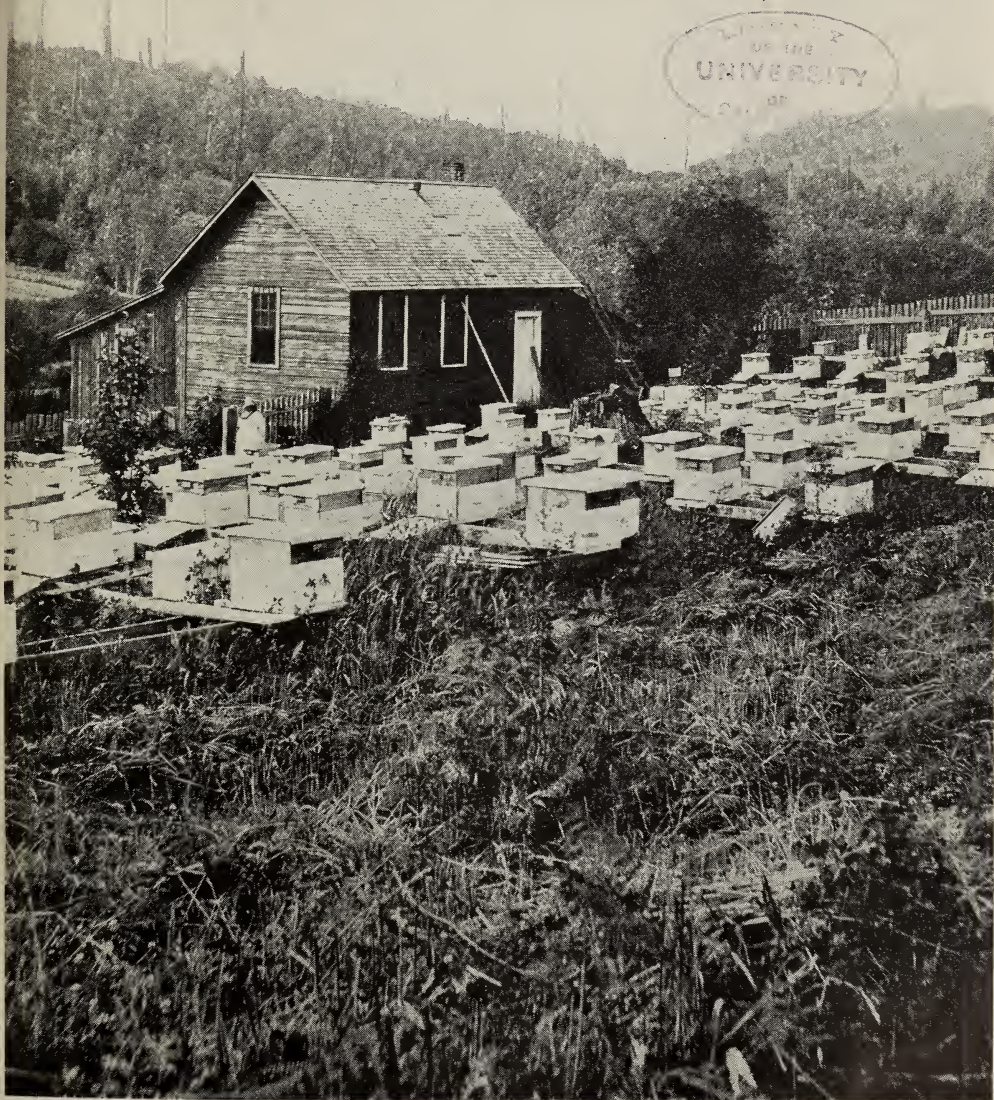
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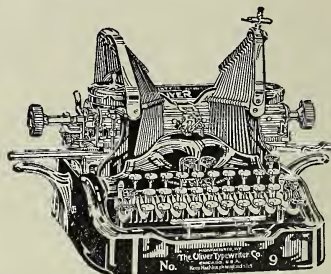
Gleanings in Bee Culture



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Gleanings in Bee Culture

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NO. 20

EDITORIALS

Our Cover Picture

THE picture on our cover shows an apiary near Oak Point, Wash., belonging to Mrs. L. Schmitt. Mrs. Schmitt, since the death of her husband, has been managing the yard herself with the help of a hired man.

The hills back of the apiary look like burnt-over timberland. As might be expected, the willowherb, or fireweed, as it is called (*Epilobium angustifolium*), is the chief honey plant, the main flow coming in July and August.

The Smoke Method of Introducing Not an Unqualified Success

FOR some reason the smoke method has not proven to be as successful this year as last. Whether the season has had anything to do with it we cannot say. However, in our own apiaries we have gone back to the cage method, which, all things considered, seems to be the most reliable. We do use, however, the smoke method of introducing virgins. But most virgins are allowed to run into the entrance of the hive when a day old, care being taken not to allow them to come in contact with the fingers. This method of introducing is used mainly with nuclei and not with full colonies.

Aster Honey—when it Can and Cannot be Safely Used for Food

IT came to our knowledge a few days ago that one of the old veteran beekeepers who has used a great deal of aster honey as a winter food in years past has found that this honey is perfectly safe when it is *all sealed*. It is when much of it is unsealed, according to this same veteran, that it brings on dysentery and death to the bees. When he finds much of it unsealed because the asters have ceased to yield nectar he forces the bees to fill the cells, and cap them over by feeding sugar syrup. In this way

the bees consume sugar stores first, and later on well-ripened aster honey.

It is safe to say that sealed honey of any kind is better at any time than unsealed. The same can be said of sugar stores.

Death of Another One of the Veterans

JUST as we go to press we learn that Mr. H. R. Boardman, of Collins, Ohio, the man who had the reputation for many years of never losing any bees during winter, passed away Oct. 1 at the ripe age of 80 years. Quite fortunately we had prepared a little sketch of his life before he died, and it appears on page 322 of last year.

Mr. Boardman was one of the best beekeepers in the United States—one of the early advocates of sweet clover as a forage plant for bees as well as stock, and a man who seemed to have the faculty of wintering bees year after year without any loss. He also was the first to show that the sun's rays, when properly applied, would prevent the granulation of honey.

He was a keen observer, a successful honey-producer, and occasionally wrote for these columns in years gone by.

So it goes. One by one the veterans are leaving us.

Filtering Honey

DARK honeys in general do not sell as readily as clear water-white honeys, such as alfalfa and white clover. An inexpensive method of filtering and refining extracted honeys like buckwheat and aster is being sought by the Federal Carbohydrate Laboratory in Washington. The laboratory workers have passed dark-colored honey through bone char and secured a product as clear as crystal.

The only drawback to a general employment of this method of filtering is that the cost of bone char is about \$60 a ton. Ordinary charcoal is cheaper, but not so effective.

tive. With the co-operation of the Forest Service the Laboratory is now looking for a cheap wood charcoal which will take out the color, and experimenters believe that they will soon find it.

If such a process of filtering dark honeys and syrups can be made so cheap as to become available to the ordinary honey-producer, a great deal of honey which has been going for manufacturing purposes, or has been fed back to the bees, can be placed directly upon the retail market. There is still a question, however, whether such a process could ever be made so cheap as to bring such honeys as the inferior tropical grades into competition with the best white clover, sage, and alfalfa, now on the market.

Ohio State Convention

THE Ohio state beekeepers will meet in convention at Akron, O., Nov. 26, 27. Dr. Phillips has promised to be present and give an address; and it is expected, also, other prominent beekeepers from outside the state, as well as those locally, will participate on the program.

Akron is the home of the rubber industry of the United States, and an opportunity will be given for the members to go through one of the big rubber plants, and possibly visit the Barber farm, owned by O. C. Barber, the match king. Mr. Barber has a model apiary on his place. Further announcements will be given later.

Nosema Apis, Bee Paralysis, or What?

SINCE our editorial on page 784, Oct. 1, we have received quite a number of letters from subscribers, telling of the peculiar malady which has come and gone, but which does not quite tally with the symptoms given for bee paralysis. The presumption is that it is nosema apis; but if it is not that disease it is evidently the same thing that has wrought such destruction in the Mississippi Valley northward in Wisconsin, and up and down the Pacific coast. The following letter from A. R. Miner is a fair sample of some we have been receiving:

I am writing to get some information. For the past two years I have noticed my bees dying off at intervals. The disease is something similar to paralysis, but I do not notice any swollen condition. The bees seem rather to shrivel up. For three or four days they will die by the thousands, then all of a sudden they will seem to be all right again. I have noticed that they die mostly when cool days hinder their flying in fall and spring. Some hives are not affected, while others beside them become so weak that they make scarcely any surplus honey.

I have sent some of the dead bees to Washington, D. C., and received the reply that they could not tell from the bees sent what was the matter. I thought perhaps you could help me. If you can, it will be greatly appreciated.

Fowler, Cal., Sept. 28.

A. R. MINER

We shall be glad to get an exact description of the disease that has been killing bees this summer in the different localities mentioned, or anywhere else in fact. We do not care for letters describing a mild form of bee paralysis; but what we do desire to get is a description of the malady that is killing so many thousands of bees, in some cases resulting in the almost complete destruction of the entire colony.

J. E. Wing, Apostle of Alfalfa

ANY one who knows alfalfa knows Joseph E. Wing. The spread of alfalfa in the states east of the Mississippi has been due more to his work than to any other cause. His experiments at Woodland Farm, his articles in the agricultural press, his lectures, his books, make him the most prominent authority on alfalfa in the United States, and that at once interests western beekeepers, so closely are their interests tied up with the prosperity of alfalfa.

Joseph Wing died Sept. 10 at his home in Mechanicsburg, Ohio, at the age of 54 years. "Alfalfa in America" was his best-known work, the one which made him famous. He wrote three others, "Sheep Farming in America," "Meadows and Pastures," and "In Foreign Fields." In all of them his charmingly intimate style is the delight of readers.

There is no branch of agriculture in this country but has felt the impress of his brain and hand. Not a beekeeper, his contribution to beekeepers in publishing the gospel of alfalfa and sweet clover has never been fully appreciated by them.

A Word of Warning in Marking the Minimum Net-weight

WE have learned that quite a number of producers are marking all their comb honey with one rubber stamp reading "Weight not less than 6 oz." A larger number are using a stamp, "Not less than 10 oz. net." They put all their honey in a shipping-case indiscriminately, marked in the same way.

The fact is, ordinary good comb honey produced with separators runs anywhere from 10 to 12 ounces minimum. We have learned from high authority that the federal Government considers low marking of comb honey as a serious contravention of the

law, and that parties that are marketing their product in this way will probably be subject to the regular penalties.

The Bureau of Chemistry has ruled that when the minimum net-weight principle is used, it must indicate as nearly as practicable the actual weight of the section. To mark every section "6 oz." defeats the *very intent* of the law, as can be readily seen. Technically it may comply with the law, but in spirit it does not; and Uncle Sam has given us the word that unless the practice is discontinued he will hold the guilty parties severely responsible.

Increasing the Demand for Honey Cakes; a Suggestion to our Readers

IF every reader of this journal would take pains to inquire for honey cakes or cakes that contain honey at the local grocery, it would increase the demand for honey foods enormously. Enormously, did we say? Yes, providing *every* reader does make these inquiries. The grocer will put in a larger stock and make an effort to push the goods.

Most of you have honey for sale. Why not increase the demand for honey cakes and thus, of course, the demand for medium grades of honey used for cooking and baking?

Then why does not somebody put up a canning-factory using honey as a sweetening agent? The honey business and the fruit business depend on bees. Why not build up both lines so there will be a larger demand for honey? Fruits canned in honey! The very suggestion sounds good and is good.

The Ontario Crop Report Again

ON p. 698 for Sept. 1st we gave Mr. Morley Pettit credit for the complete honey crop report issued. Referring to this he begs leave to make some corrections. He writes:

Mr. Root:—I wish to thank you for your kind words in editorial, page 698, on crop reports in Ontario, but feel like making one or two corrections.

The credit for the work of crop reporting in Ontario is due more largely to the committee—Messrs. Wm. Coussé, H. G. Sibbald, and W. J. Craig, than it is to the secretary, in that the work was inaugurated in 1903, when the present secretary was a very junior member of the Ontario Beekeepers' Association. Then, while the report is from 19,107 colonies, it is from only 300 members, and is valuable for averages, but not for totals. I would not go so far as to say that this report gives much of an idea of the amount of honey in sight in Ontario; at least, we are far from satisfied with the fact that only 300 out of about 1400 members reported, and that there are at least six or seven

thousand beekeepers in Ontario who are not even members. It is true, however, that this annual report has been of great value in standardizing prices of honey. Dealers have come to watch for this report with the same interest and confidence as beekeepers, and some have gone so far as to become members of the Association, so as to be sure of receiving our publications regularly.

The "Dark-honey-crop Report" recently issued, a copy of which I am enclosing, shows that, in spite of the depression, owing to war conditions, honey is selling freely, and is going to be looked upon by many as being as much a necessity as fruit, at least.

Guelph, Ca., Sept. 14.

MORLEY PETTIT.

A Manual of Bee Husbandry for New Jersey

THERE has just been issued by the New Jersey State Board of Agriculture a book on bees, of 72 pages, by Elmer G. Carr, deputy of the State Entomologist in bee-inspection work. The conditions in New Jersey are quite peculiar. There are almost no large beekeepers in the state, and the flora is comparatively limited; but according to Mr. Carr's manual the industry can be very materially developed. Instead of averaging only 14 lbs. per colony it would be possible with a better knowledge of bees to secure nearly 50 lbs. In fact, this bulletin was issued in order that a "more thorough and widespread knowledge of the general principles of good bee management" might be available.

Mr. Carr is a good beekeeper, and, so far as we have been able to go over his work, we have found it correct and orthodox in its teachings. It was prepared with special reference to conditions in New Jersey; and every beekeeper in that state, at least, and, in fact, every farmer and fruit-grower in New Jersey, should secure a copy. We presume it can be obtained by residents of the state by a mere application to the State Board of Agriculture, Trenton, N. J. Ask for Bulletin of Bee Husbandry by Elmer G. Carr.

The Abuse of "Bait Sections," the Danger of Feeding Back to Finish up Comb Honey

A LARGE buyer of honey recently told us that many comb-honey producers are making a mistake in allowing their "bait sections" to go in with the rest of their comb honey that is sent to market. These "baits" are always inferior to the combs produced on foundation, built out, filled, and capped the same season. The great trouble with the "baits" is that they granulate almost immediately after they leave the producer's hands; and a section of granulated honey

in a case of good honey is almost sure to knock the price of the whole case clear down.

After the producer sells a large shipment of comb honey, the honey is out of his hands. The buyer turns around and complains that he has found granulated sections in many of the cases. Fearing that every section will granulate like the "strays" he has seen, he will knock off a cent or two from the agreed price "because the honey was not as represented." Producers should always put the baits by themselves, and sell them locally if possible; but under no circumstances put them with the rest of the comb honey.

The producer can hardly avoid the use of bait sections in the first super; but there will be no need of using them in a second, third, or fourth super. Let us suppose the producer has a crop of three supers per hive. One-third of the supers would have a single bait. That bait shows up wrong almost at the start, and the result is that the buyer when he finds it in a nice case of honey is afraid of the whole shipment, and he pays accordingly. Possibly the beekeeper might recover by bringing suit, but it would never pay him to go to court when only a cent or two is involved, so he would take what he could get.

FEEDING BACK TO COMPLETE UNFINISHED SECTIONS.

This is practiced by some of our best producers: but the product is always inferior to the regulation comb honey. Even if one uses very light-colored extracted to finish out some of his sections, the product when it appears in the section is darker than the rest of the honey. We do not know why this is so, but it is so. Buyers nowadays are becoming very discriminating; and it is our opinion that all fed-back sections as well as baits should be sold around home. Never mix them with the other comb honey for the general market.

Can You Beat it?

WE have a letter from William Lossing, of Phoenix, Arizona, one of the largest honey-producers in the country, in which he says he has loaded what he believes is the largest car of honey that was ever shipped. He had an order, he explains, for a carload of honey—"the larger the better." He accordingly secured the biggest car he could, and crowded in 646 cases, or a total of 87,589 lbs. The average car does not go above 40,000 lbs. If any of our customers or subscribers have ever been able to beat this, let them speak out.

Incidentally it may be well to remark that there might be considerable danger in making such a heavy load of honey as this. Many of the western cars have a capacity of 100,000 lbs., and these weights carry with them permission to add 10 per cent more. It is evident that our friend, unless the car was a very large one, must have piled these cases clear up to the ceiling in the car. The bottom cases must, therefore, have had an enormous weight on them. Moreover, such weight, subjected to the violent jerking, backing up, and starting of a whole freight train would be almost sure to cause leakage in the bottom cases. Unless one takes a ride on a freight train he can have not the least conception of the fearful pounding that a freight car receives.

Taking everything into consideration, we question the advisability of loading so large a car with honey. One might pile in pig iron, wheat in sacks, and other commodities, and the danger of loss would be comparatively slight.

We shall be interested in learning how this car got through.

The Freight Classification Committee's Designation of Comb Foundation as "Bee Comb."

A SUBSCRIBER has written us a vigorous protest against billing comb foundation in express and freight shipments as "bee comb." He says he has observed that railroad men have the impression that this is artificial comb, because it is sold by the bee-supply manufacturers to the beekeepers, and he thinks it is high time we should stop fanning the flame of the artificial-comb-honey canard.

We have written our correspondent that the supply manufacturers had nothing to do with the term adopted by the Railroad Freight-classification Committee, and at present they are powerless to affect the change. These people do not know what comb foundation is, and therefore put into the classification a term which to them expresses what the article is; but the trouble is, it expresses altogether too much.

We suggest that, when the classification committee meets again, the manufacturers of bee supplies, especially the makers of comb foundation, request the elimination of the term "bee comb" and substitute the usual term of comb foundation, for that is the term that exactly expresses the name of the article itself.

We shall endeavor to give an announcement when this classification committee

meets again, and will then request that our subscribers pour in a mass of letters to the committee, explaining why this peculiar designation on the part of the railroad companies is doing harm to our industry. A systematic, united, and concerted action on the part of all parties interested will bring about results.

There is another reason why the term "bee comb" should be eliminated. Real honey-comb would be more expensive and much more fragile—that is, more subject to damage than comb foundation. If the railroad companies have an idea that the article is exactly what it purports to be, as shown by the name "bee comb," and they probably do, they would charge a higher rate of freight. From an economic standpoint beekeepers and manufacturers alike should seek to get another form of billing that will help us to get a lower rate of freight. It is excessive as it is.

Granulation of Honey Hastened by a Wide Variation in Temperature

WE quite agree with Mr. Holtermann in what he says on this subject, p. 799, last issue. Some years ago, during very cold weather, we conducted a series of experiments in this matter. The winter was very severe, and for over six weeks the temperature ranged around zero outdoors, much of the time below.

We placed some liquid honey in a building where there was no artificial heat. This was left undisturbed during the entire winter, but it did not granulate till toward spring. We also placed some of this same lot of honey under conditions of *varying* temperature. Part of the time the mercury went down below zero and part of the time up to 80 F. We tried to have as much variation as possible with low dips, every now and then to below zero. In the course of ten days cloudiness appeared, and in a month's time granulation was complete.

Another lot of this same honey we kept in a *uniform* temperature of 70 to 80, but it did not granulate the whole winter nor next spring. The following spring, when the weather began to warm up, the honey that had been long subjected to a zero temperature for six weeks granulated; but the same honey that was kept in a warm room remained liquid.

These experiments, repeated at other times with the same result, go to show that cold is more conducive to granulation than a warm atmosphere, and that a *variable* temperature is far more potent than either.

Comb honey, unless it is very well ripen-

ed, should not be put in a cold room except temporarily, just before placing it on the table. In a zero cold or even a freezing cold comb honey cannot be handled without danger of breakage and leakage. Our comb honey, tons and tons of it, is always stored in a temperature of between 75 and 80, kept warm by means of steam heat or with a gas-stove when steam is not available. We would not, for a good many dollars, allow the temperature of the comb honey in our storage-room to drop to a freezing temperature for more than a short time.

Comb or extracted honey put in an ordinary ice-box or refrigerator for a few hours before eating is always improved; but at all other times it should be kept away from a cold atmosphere—particularly one that is changeable.

A Case of Chilled Brood in October

A BEEKEEPER in this county, some twelve miles from us, and eight miles from our nearest bees, came to our office one day, and said that something was awfully wrong among his bees. Most of them had carried young dead brood—lots of it—out in front of the entrances. The brood was white—that is to say, not discolored, nor anything like foul brood. He wished us to drive down and see what it was.

Knowing he had foul brood a year or so ago, we suspected this had something to do with it. We drove down in our machine, and examination showed quite a lot of young brood in the imago state in front of some of the entrances, that had been hauled out of the cells by the bees. Apparently the brood advanced to the stage just before the wings were formed, and then died. We went through several of his hives, and found that in every case where white dead brood was in front of the entrances the colony was too weak to keep the brood-nest warm. In at least four cases the colony had been reduced by American foul brood, and in several others the owner had put on upper stories of wet extracting-combs which he said he placed there temporarily for the bees to clean up. Shortly after this came a cold spell with a light freeze. This lasted for several days.

Colonies having brood-nests twice their normal size, or colonies reduced by American foul brood, had evidently contracted their clusters so that some of the sealed brood, at least, had chilled and died. This the bees removed, with results as stated.

We told our friend that he must get busy and clean up his American foul brood, or he would have something worse on his

hands than chilled brood. We noticed he had some old hives and some old combs under a shed. The covers did not fit very tightly, and robbers were smelling around. Most of the hives were old and home-made, with gaping cracks. We promised to send one of our best men down to help our friend out, because we cannot afford to have this condition of things even eight miles from our nearest outyard.

A word of caution should be entered right here, either to unite colonies that are not very strong, or contract their brood-nests. Too much hive capacity is bad. When the bees can hardly fill one story, it is folly to put on one or more stories of wet combs, and leave them there after a cold spell of weather comes on. There is nothing serious about a little dead brood; but all good healthy brood at this time of the year should be allowed to hatch. Every young bee is worth a dozen old bees for wintering.

Dr. Phillips' New Book, "Beekeeping"

OF the making of books there is no end, the wise man said. One would almost think there was no room for a new bee-book; but in Dr. Phillips' work, a preliminary notice of which appeared on page 739, Sept. 15, we have something new and unique. It covers a field only partly covered by others. How does it differ from other standard works on bees?

One would naturally suppose that its author, a scientific man—a trained entomologist, and one who is constantly associated with some of the best scientists of the Government—would turn out a book that would be so technically scientific that it would be beyond the reach of the average beekeeper. This is not the case. While it is scientific, it is couched in such language and style that the average reader can easily understand it. But when we say it is scientific, we might, without further qualification, convey the impression that it is not also practical. As a matter of fact, the book is intensely so, because Dr. Phillips has traveled all over the United States, mingling with the best beemen in the country, and he has had, during several years back, one of the best beekeepers in the United States, Mr. George F. Demuth, as his first assistant.

Mr. Demuth, by the way, is a man who has been making good with his bees year after year; and not only that, he has been operating his yards at long range, and still makes them pay. It is that man who has been the constant associate of Dr. Phillips,

and who went over the proofs carefully before the book was made public.

As if that were not enough, the author went still further and placed himself in touch with Dr. C. C. Miller, of Marengo, Ill. With manuscript in hand he read paragraph after paragraph to this modern Ganaliel. Dr. Miller, as those who know him best, is a severe critic, and anything that might not be perfectly orthodox so far as comb honey and swarming are concerned, would be caught by Dr. Miller. In the main he approved everything that the other doctor said, offering only here and there an occasional correction.

This work is distinct from any other on bees in that it does not follow in the wake of other writers. It deals with basic principles in such a way that the reader will better understand why this manipulation will work and why that will not.

For example, Dr. Phillips has undertaken the difficult task of giving the main cause of swarming. At first we were inclined to think he might have missed his mark; but the more we have studied his reasons the more we have come to the conclusion that he is probably right. But of this we shall have something more to say at another time.

In the matter of comb-honey production he has followed Mr. G. F. Demuth and Dr. Miller very closely. On the subject of wintering he sets forth some new principles—new, did we say? Well, not quite that either. He has discussed the subject from the standpoint of the causes that lead to failure and the elements that lead to success. He and his assistants in the Bureau of Entomology have made some new and important discoveries on the subject of wintering, some of which have been given in these columns. See page 789, 1914, and again on page 49 of this year. In the light of these discoveries he has set forth some principles that we verily believe will help clear up the subject of wintering, explaining why bees die sometimes and not others, in a way that has not been done before.

We hope, in a later issue, to give some extracts from this work; and while we may not agree with all that its author says, his is a book that the man who keeps bees for the bread and butter he can get out of them cannot afford not to read.

The price of the work is \$2.00, and it may be had from this office. It contains nearly 600 pages, well illustrated with pen-drawings that bring out all the details that it is possible to show. It will be clubbed with our own work, *The A B C and X Y Z of Bee Culture*, for \$3.00, or with *GLEANINGS* for one year for \$2.50.

Dr. C. C. Miller

STRAY STRAWS

Marengo, Ill.



"HONEY is not apt to be used as much in extremely hot weather," p. 786. Is not that chiefly because honey is a heat-forming food, and so, like fats, is craved less in hot weather?"

GRACE ALLEN, p. 791, speaks of a meet of seven beekeepers, and says it was a good meeting. Even in a meeting of a hundred, it's the few of the right sort that make it good. One of the best beekeepers' meetings I ever attended was last labor day, with an assembly of three!

J. E. CRANE, I'm much interested in seeing that you replace old or inferior queens with virgins or queen-cells, p. 748. Now the thing I'm anxious to know is how many of these swarm out. I have an assistant who nearly has a fit every time I talk of putting a virgin or a cell in a full colony—says they'll swarm and go off.

J. L. BYER, p. 794, you express surprise that so good authorities have not heard the queens calling except on comb. If you call Editor Root and myself authorities, we both agree that a queen often pipes outside a hive, only he thinks the virgin says the same thing outside the cell that she said in it, and I don't. [See answer to another Straw on this question.—Ed.]

WHILE it is true that bees nearly always work on the same kind of flower on the same trip, and, indeed, in many cases throughout their whole lives, yet I have seen (I think never more than twice) a bee going back and forth to flowers not related. I don't know why—possibly because forage was so scarce that she was glad to visit any and every flower she could find. [It is the exception that proves the rule.—Ed.]

"THE Mineral Constituents of Honey," p. 797, is worthy of widest publication. I doubt if one beekeeper in a hundred realizes the importance of minerals in honey. Take iron alone. For years physicians have been always seeking for some better form in which to administer it, yet here it is in the best form in the most delightful vehicle, and yet for the most part ignored. I believe I'm a stronger man for the mineral elements I get in honey. And as a rule bees fed on honey have more vigor than those fed on sugar, since sugar is utterly lacking in the important mineral constituents.

MR. EDITOR, you ask, p. 790, "Is it not probable that the piping is made by a

hatched queen, and the quahking by another one in a cell as a challenge?" Certainly; only it is believed that the challenge is given by the one that pipes. You may be interested in seeing this matter discussed by the Baron of Berlepsch in *American Bee Journal* for 1861, p. 201. He found that the mature young queen (even if only one in a hive) always quahks for a time in her cell, before she emerges and pipes. He gives some very interesting observations, and says: "From these observations it is evident that young queens teet [pipe] and quahk from sheer jealousy; and that every queen, before emerging, quahks for a time, to assure herself that no rival is at large in the hive. Not till after her reiterated calls have remained unanswered does she feel herself safe, and release herself by severing the cap of the cell." You then ask, in substance, whether quahking is not the same as piping, only that the one that quahks is in the cell. Most emphatically, no. Whatever difference there may be from imprisonment in cell, there is one distinct difference that cannot be accounted for in that way—a difference that it doesn't need a musician to detect, as J. L. Byer seems to think. In piping, the first tone is long drawn out, several times as long as the last, each tone from first to last becoming shorter and shorter. In quahking the tones are all short and all of the same length. If a queen should be shut in a cell and should pipe, the first note would still be several times as long as the last, would it not? And in that respect it's utterly different from quahking. [We fail to see yet why piping and quahking cannot be made by the same organs and in the same way. While the notes are more prolonged in one case than in the other, is there any reason for it except that the waxen cells are nearly air-tight? and, moreover, bear in mind this: The noise, whatever it is, is made by the wings. We have seen queens pipe in queen-cages in our office. The wings make a tremulous motion, very plain to be seen. When the young queen is in the cell she probably does not have room enough to vibrate her wings as freely as she does when outside. She does the best she can; but her efforts in her narrow quarters of necessity result in a different sound. If you ever saw a queen pipe (and every queen-breeder has seen them do it hundreds of times) you will have noticed the vibratory movement of the wings close to the thorax.—Ed.]

J. E. Crane

SIFTINGS

Middlebury, Vt.



On page 651, Aug. 15, the crop in Ontario is given as fifty-five pounds per colony. Is this comb or extracted honey?

A bunch of sweet-clover blossoms, white and yellow mixed, makes a beautiful bouquet for the dining-room table.

The editor says, page 657, Aug. 15, "We should like to know what you mean by breeding from the best." Have we at this time any well-considered standards of excellence for our bees?

Dr. Miller, page 657, Aug. 15, says the *British Bee Journal* copies a clipping which says that one firm in that country uses 40 tons of honey a month in the manufacture of a cough mixture, and comments, "Some honey." I should say, "Some story."

On page 481, June 15, Dr. Miller says, "If all 'we men' had voted with me in the last forty years there wouldn't be a saloon in the land," and he is right; but that is not all. There wouldn't be one red-faced, unsteady-gaited man by newspaper courtesy called "drunks" where there are ten now.

Dr. Miller inquires, page 569, if we can steam a whole box of sections at once with a tea-kettle. Well, no—not unless you have a very strong jet of steam. We took a bundle that we could hold in the hand, allowing the steam to pass through the corners. It takes a little time, but does a good job.

The sum of \$25,000 paid out in one year for advertising honey by the A. I. Root Co. This seems like casting a good deal of bread on the water, expecting it to return after many days. I shall be greatly mistaken if the rank and file of beekeepers don't get some of that bread as well as the A. I. Root Co., when it returns.

I enjoyed reading Mr. O. O. Poppleton's experience with the Long-idea hive. I confess I was somewhat prejudiced against such a hive until I came in contact with it in his yard. The ease with which it can be opened and examined at any time, even when bees are storing surplus, will commend it to almost any one, especially in the South.

An article by John W. Love, page 668, Aug. 15, on the factor of cleanliness in honey distribution is of much interest. He says, "Comb honey put up in a dust-proof carton suggests delicacy and sanitation more than that displayed in a glass showcase." It is many years since we began to use cartons here in the East, and Mr. Burnett, of Chicago, informs us that they are coming into use in the West.

Looking over a yard yesterday for foul brood, I discovered one I had been into where robbing had begun. I tried to drive away the robbers with smoke, but the more I smoked the thicker they came. I piled grass and weeds about the entrance, but still they came. Then I placed an empty hive in front of the one they were trying to rob. In a moment they left the latter and rushed into the empty hive that contained some dry combs, and more surprised bees I never saw. The ruse was an entire success.

Several articles in the Aug. 15th GLEANINGS on aster honey show the widespread interest in this source of winter stores. The objections to it appear to be that it is thin, and bees winter badly on it. Now, I have my doubts as to whether it is any thinner when gathered than other honey or nectar; but it is gathered late, often when the weather is cool, and the bees are, for this reason, unable to reduce such nectar to a thickness or ripeness in the North as to make it a good winter food. Where such is the case I believe it would often be advisable to reduce the size of the brood-chamber to increase the temperature so it could be ripened.

That extract from the *Rural New-Yorker*, page 567, July 15, is well worth more than a year's subscription for GLEANINGS. I wanted to put in a half-acre, but thought I must first plow the ground—not necessary. And, again, I have wondered how it could be best brought in in pastures. I thought, of course, the first thing would be to plow the old rough pasture—a very difficult job; but from this I learn I can just disk the surface, roll, and sow the seed. It has seemed as though the use of sweet clover for pasture might be more helpful to beekeepers than that sown for hay, as it will be quite apt to get the start of stock and throw out a good deal of bloom the latter part of summer.

BEEKEEPING IN CALIFORNIA

P. C. Chadwick, Redlands, Cal.



Dr. Miller tells us, page 747, Sept. 15, what points he would breed for under various conditions, but omitted saying anything about disease-resisting qualities. Is that not one of the most important points in this day of disease?

Mr. Frank B. Gunther, of this city, has recently sold his apiary and retired from the bee business. Mr. Gunther has been a beekeeper in this locality for many years, and is one of the old timers. Failing health has caused his retirement.

Mr. W. T. Cary says, page 770, Sept. 15, "Use two queen-excluders instead of one, with a bee-space between them," as a modification of the Alexander plan for keeping queens apart. I am carrying several queens over others, separated only by screen wire, which, to my notion, is the best plan yet introduced.

On page 695 I read this headline: "Drone-laying Queen Brood Sometimes a Stinking Mess." Correct! I had some experience in that line last season and this. Last season I was very much alarmed for fear of "black brood," but it proved to be only dead brood dried down in the cells, and otherwise greatly resembling black brood. A change of queens soon corrected the matter.

There is a beekeeper in this locality who claims to have cured American foul brood in an apiary that was badly affected, without destroying any combs above the excluders, the bees being allowed the free use of the honey. He contends that the honey above the excluders is not diseased; and to my notion he has proved the fact. But it must be remembered that the excluders are not to be removed at any time of the year. Shaking (or any other system used) can be carried on without permanently removing the excluders.

Mr. Crane says, page 658, Aug. 15, "Do we sing as we work? It is interesting to note that the birds sing the most when they work the hardest during the nest-building and the rearing of their young." Well, most of the singing takes place during the nest-building, Bro. Crane. When the little mouths begin to open for food there is a

change in the atmosphere, so to speak, and business takes the place of song. I am "some wise" on this line from my own experience.

On page 693, Sept. 1, the editor says: "Every time the granulated article is reliquefied some of the flavor is lost." That depends on how it is reliquefied. If the cans are set in the hot sun with the caps left on, the honey will reliquefy without any injury to the flavor. This season I placed a quantity of granulated orange honey in a local warehouse on an upper floor next to the roof. The heat during the summer became intense at times, causing the honey to reliquefy perfectly, yet I do not think any one could detect the slightest injury to the flavor. In my opinion intense artificial heat is the chief cause of the loss of flavor.

In dividing colonies for increase, the old queen with the old bees should be left on the old stand, and the young bees and a good portion of the brood moved to a new stand. Many do not realize the importance of eliminating the old bees as much as possible before introducing the new queen. It is a good plan to remove a colony to a new place when introducing a queen and placing an empty hive on the old stand for a few days to catch the old bees, after which they may be returned to the original colony on the original position. This is not necessary where there are other hives near for the field force to find their way into.

Dr. Miller, page 631, Aug. 1, says he has had many cases of laying workers, but does not remember a single case in the spring. Well, as I have before said, that is the most natural time for them to occur with me, and I have seen very few after the season was advanced far enough for the production of plenty of drones. He asks also if I ever knew a case of laying workers and not a whole lot of 'em. Now he has me, and I believe the whole beekeeping fraternity. I never saw a bee in my life that I could point out as a "laying worker." If Dr. Miller has, he is an exception and has enjoyed a rare sight. Following the instinct of the bee it is more natural to think of a colony tolerating only one laying bee to the hive. And, 'way down in the bottom of my heart, I don't believe that any one knows.

BEEKEEPING IN THE SOUTHWEST

Louis H. Scholl, New Braunfels, Texas.



A TRIP TO CALIFORNIA.

If time permits I will take a trip to California this fall. The primary object of the trip will be to visit some of the leading California beekeepers and to study beekeeping conditions as they exist in that state. It is to be a mission similar to that on which the Texas A. and M. College sent me to Colorado a number of years ago. At that time I was connected with that institution as apiarist and foul-brood inspector. During the last few years my connection with the state department of agriculture has been that of apicultural expert. I have always made it a point to gather all the information possible on beekeeping subjects. My main object on the Colorado visit was to look into the foul-brood situation there and the inspection work. My thirty days' sojourn in that state, and the visits to the numerous beekeepers, proved extremely profitable. I am anticipating the same experience in my California trip.

Some of the first information that would be appreciated by me would be suggestions as to the best routing of a trip in order to reach the most of the interesting places that I ought to try to arrange to see. Of course, it will be impossible to make all the important points nor to visit all the beekeepers whom I ought to see; but with such information as I may be able to get from those who will be kind enough to write me, I shall be better enabled to outline an itinerary that will be the most profitable to me. The editor can start the ball rolling, from the fact that he has recently been there. Who else will write me? I shall also be glad to hear from some of my California friends.

THE SEASON AT PRESENT IN TEXAS.

Rain, rain, rain! There has been hardly a day for the last month or more when we did not have one or more showers of rain. While these were extremely welcome at the beginning, their continuance and the resultant bad roads and delayed work of various kinds have been deplored by many. I had wished most anxiously for these fall rains to set in, long before they came. It had been very drouthy for a good many weeks, and our bees were doing absolutely nothing as a result of the cotton stopping growing long before the usual time. A rain in July would have meant a continuation of our

summer honey yield from that source without a stop; but the extremely dry weather put an end absolutely to the honey-flow from the cotton. From similar experiences I knew that only some light rains would mean that the cotton would put out a fresh growth, and our honey yield from that source be increased. Although this has come a little later than usual our bees will still get a nice lot of honey. They are already busy on the cotton, and also on broomweed as well, and some of the wild fall flowers.

These rains seem to have been quite general over the state. While the Southwest Texas section will not reap any surplus honey I feel that the rains have been beneficial in stimulating some of the fall honey-yielding plants to permit the bees there to store up at least some winter stores. The broomweed is the chief of these fall yielders there. Although the honey is rather strong, and yellow in color, it is excellent for winter stores. The beekeepers in that part of the state have had a short crop, except in a few favored localities, and have had to feed their bees in some instances.

Throughout the central and northern part of the state, especially throughout the cotton-growing belt, there has been less complaint. In fact, many of the beekeepers with whom I have had occasion to converse during the last few weeks have admitted that they were getting a better crop than they anticipated after considering the unfavorable spring conditions.

As we use a great deal of extracted honey for packing our bulk comb honey we buy large quantities from other beekeepers every year. Thus far we have already bought over 50,000 pounds this year. Although indications at first were that there would be a shortage of extracted honey, and we were beginning to arrange for procuring our necessary supply from other sources, we have been receiving more offers of extracted honey than we anticipated. Indeed, lately the offerings have been beyond our needs at times. At the present time we have nearly a dozen letters offering extracted honey.

I have mentioned this because it tends to show that there was a good deal of honey produced in Texas in spite of the reports prevalent to the effect that there has been an almost entire failure in the Lone Star State. Our own crop will not be far behind our last year's yield, if not just as good.

CONVERSATIONS WITH DOOLITTLE

At Borodino, New York.



COLORS AND QUEENS.

"Do bees dislike black? Will they try to sting an animal that is black any sooner than they will one that is gray, brown, red, or white? I am told that bees have this special antipathy."

In my younger years in apiculture I accepted the idea as the truth. One day four of us met at one of the apiaries, I wearing a black felt hat, the other three wearing straw hats. It was not long before Doolittle was the target for apparently all of the cross bees in the apiary, the bees getting on that black hat and singing and stinging very much as they will in one's hair. Of course the trouble was in the color.

A few weeks later we met in another apiary, I wearing a white felt hat, and the others had hats of various shades, but none black. To my surprise, I was again the target for the cross bees, as the hat I wore seemed to displease the bees much more than the hats of other colors. They sang and stung away at that hat the same as they had done when I wore the black one. Again we met at my own apiary; and as this was a very warm day we all wore straw hats of about the same color. To my surprise, I was again the target for nearly all the cross bees we happened to stir up—not that the bees attacked my hat more, but they seemed to want to sting Doolittle more than any of the other three.

Then I concluded that their dislike was for my person. And I have found this to be so in the majority of cases wherever I have visited with beekeepers at different apiaries. I have often felt almost ashamed of myself when being obliged to hide my head in a bush or call for a veil when others had no trouble. But of this I am certain: Bees have a great antipathy toward any clothing that is fuzzy or of a hairy nature, and such should be avoided when work is to be done in the apiary.

"Is the practice of cutting out queen-cells at the beginning of the swarming season, to prevent swarming, a good one where one works for section honey?"

Quite a few of our practical apiarists have given that plan as a good one; but from years of experimenting along that line I cannot help thinking that much honey is lost in the attempt to stop prime swarming by destroying queen-cells. And I also think that the attempt to stop after-swarming by the same practice often in-

creases the number of after-swarms. Especially is this true when the cells are cut before all the unsealed larvæ are too old to be coaxed into something that will temporarily answer for a queen. Under the swarming impulse, bees do not take kindly to being allowed just one queen-cell; therefore, when they have any larvæ which can possibly be transformed into something which will take the place of a queen they will do this, and so issue as a "second swarm" with the queen emerging from the cell we have chosen for them, thus leaving the parent colony with but a poor apology for a mother. It is better to wait eight days after the issuing of the prime swarm, and then at night listen at the side of the hive, with the ear pressed against it, for the piping of the first young queen that has emerged. When the young queen is twenty-four hours out she will tell you herself that "there will be a hot time in the old town" tomorrow by the fuss she is making inside during the gathering darkness. In the morning you can shake the bees off every comb in the hive, so that you can see every queen-cell, and miss none; and when all are cut off you are sure of no after-swarm.

"Would not the following be a good way to requeen each colony every year and prevent all increase? Allow the prime swarm to come out naturally. Have all wintered-over queens' wings clipped. When the swarm is in the air, cage the clipped queen and go through the hive, cutting off all queen-cells. Lay the caged queen at the entrance, and two or three of the best cells around the cage containing the queen. When the swarm returns, place an open-mouthed box over the caged queen and cells, thus allowing the bees to cluster over and about them. Eventually the old queen is to be killed, and the first queen emerging from the cells at the door reigns in the hive for another year."

The question would be whether doorstep foundlings would be as good as lawful ones nursed and brought up in the genial warmth surrounding them in the old homestead. Even if a small bunch of bees stays there faithfully, would not the temperature inside the bunch get low on a cool rainy night? Then, what would there be to hinder the bees inside the hive, with mother and embryo sisters gone, starting more queen-cells from the brood remaining in the hive, which, much of it, would be of right age to change to queens?

GENERAL CORRESPONDENCE

SOME REMINISCENCES OF A LIFE AS A BEEKEEPER AND SUPPLY-DEALER

BY WALTER S. POWDER

In my boyhood days, while with my parents on a fruit-farm at the edge of Cincinnati, I was much given to nature studies. The honeybee appealed to me as the most fascinating study in all the world, and it became my irresistible hobby, much against advice from those who were near to me. I secured all the literature available at that time, had valuable instructions from the late Charles F. Muth, kept my little apiary attractive with the lawn-mower and by building rustic chairs under the shade-trees, and then I had but one goal in view—I longed for at least one hundred colonies. I even thought that if I could secure the larger apiary I would be so contented that I would never ask for anything further.

I reached the goal; but while I secured much pleasure in reaching it I still found other wishes developing. I now began to wish that I could rear queen bees and advertise them in the bee journals. I had secured a crop of honey so large, filling tanks and barrels, that my father had some fears that the honey-house would yield to the weight. My honey-house was the upper floor of our shop, strongly built; but I remember his placing braces under the floor. My father found a demand for every pound of honey that I produced; and as I was determined to say that I was never out of honey I had occasion to purchase several barrels of it from New York and from Michigan, honey in those days being shipped in barrels and kegs instead of tin cans. This proved profitable, and here is a hint for beekeepers of today.

My entire apiary was devoted exclusively to producing extracted honey, using two-story Langstroth lives with ten Langstroth frames to each story, and a queen-excluding honey-board. This controlled the swarming problems; for at the beginning of the flow I would place the queen and two or three frames of brood in the lower story, filling the story with empty frames, and placing the rest of the brood in the upper story over the excluder. I often found it necessary to build many colonies three stories high.

It had been one of my pleasures to provide an ample supply of combs, all built

from full sheets and mostly wired. At the beginning I had quite a few crooked combs, and a few that had large patches of drone comb. I gradually disposed of them by cutting out drone comb and cutting up some of my best combs with which to patch or replace the drone comb. I also managed to have all of my combs built to the bottom-bars of frames. To accomplish this I cut off the lower edge and replaced with a strip of comb to fit, and returned such combs always in the upper story.

I also learned to secure absolutely perfect combs without wiring. The idea would be quite practical today; but it seems that the time is not ripe for it. I would use full sheets of medium-brood foundation, cutting off half an inch from the end of each sheet. The object is, not to allow the sheet to touch the end-bars till it can have time to hang plumb. These frames are now to be inserted in brood-chambers, a few at a time, and always between combs of brood so that an equal force of bees will work on both sides of the frame at the same time. After one season in the brood-chamber they can safely be used in upper stories for extracting.

My experience in producing comb honey was not entirely satisfactory; at least I realized that I could secure more dollars and cents on the plan of extracting. In those days a section about four by five, used without separators, was quite popular, and I am not sure that it was not a mistake to discard it, for the smaller section with separators and small clusters does not bring as good results. We know that anything that divides the cluster is against comb-building. For those who ship comb honey, separators seem to be a necessity.

I produced one lot of strictly fancy comb honey, but I had my sections, supers, and separators made to order, using a section open top and bottom, and also open at corners—a sort of compromise between the plain and the standard section, and it could be used with or without separators. This was back in the '80's, and the sections were illustrated and described in GLEANINGS. The article brought me so many inquiries that I began to think I had the world by the tail; but my hold soon relaxed, for I

was not prepared to offer the goods. I used separators made of coarse wire cloth, and sections were clamped with thumb-screws.

In using some of this honey in an exhibit I recall one man remarking that bees had never seen that honey! I tried to explain that machine honey was out of the question; but as he walked away he muttered, "Well, I don't know. I have just found out that I have been eating manufactured eggs all winter."

Speaking about producing comb honey, I think now that if I were so fortunate as to be back in the business I would produce both extracted and chunk honey. There is an increased demand for chunk honey, and it enables the producer to secure the price of comb honey for a whole lot of his extracted honey. I think I would produce some comb honey in shallow extracting-frames and cut it out as fast as I secured orders. One must not prepare a lot ahead, for it is not desirable to allow granulation. I would use a six-pound pail with three pounds of comb and three pounds of extracted. In fact, when I did have goods to sell I used this method of putting up honey, and found a rapidly increasing demand. The method came to me by accident in taking care of comb honey that arrived here in broken condition.

Speaking about establishing myself back in the '80's as a queen-breeder, the more I thought of it the more I became enthused, for I felt that my surroundings were favorable, and I began to dream of pleased customers and taking armloads of cages to the postoffice! I also realized that much expense would be attached in requeening my yard, and that much material would be required for mating-boxes. I would not consider anything but the highest standards in every detail. I formulated my plans, and began that winter in making all arrangements, completing my library, making mating-boxes, etc. About one year was consumed in requeening my yard to the standard that I required.

My mating-boxes were my own idea, and I still think well of them in spite of strides in improvements. I ordered ten-frame hive-bodies with tops and bottoms and grooves cut in ends for three thin division-boards which made four compartments with an entrance at each end and one at each side. The point was that they would co-operate on heat, and that by using the standard frame I could unite at the close of the season with no loss of bees or brood. A detachable number-disc hung on each compartment, and one on each hive gave me

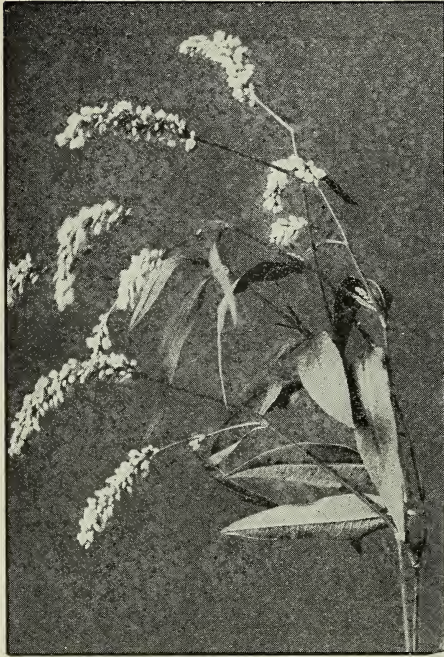
opportunities for an accurate book-record of every queen in my yard.

In those days much was said about controlling the mating of queens, and for a time I thought I had at least partly solved the problem. We knew that queens usually take their flight in the early afternoon, at such times as young bees are taking play-spells. I knew that by feeding my nuclei a small amount of syrup in the forenoon the queen would take her flight, and at such times very few drones were in the air; but by feeding my best colonies I could also force the drones to fly at the same time. I still think that something might yet be accomplished by further experimenting in this line.

My hand-hold slipped again! In queen-rearing I met with quite a few failures, and found it necessary to refer to my books frequently. With more experience I was more successful; and yet it seems to me that I followed old plans, and I do not know to this day why some ideas were failures and again successful after pursuing the same methods. Perhaps my enthusiasm had a bad effect at the beginning. Our text-books are fine, but there is one thing that has always given me much concern. It is the ideas expressed about fertile workers and drone-laying queens.

I cannot induce myself to believe that ever a seed in vegetation germinated without pollenization or that ever an egg laid by an insect developed life without fertilization. I should like to see modern science go deeper on this subject. Modern science seems to go deeper on subjects where more value is at stake, such as mining, medicine, etc., but I find what I think is a parallel case on my subject pertaining to the eel. Aristotle taught that the eel was without sex, and that they were produced spontaneously from the earth, and even Pliny agreed with him. It was not till 1877 that an Italian naturalist identified a female eel, and showed that they lay millions of eggs, always in brackish waters. As a matter of commerce the bee is far ahead of the eel, although eels are considered a fine article of food by some people.

Excuse me, for they remind me of a snake; but I presume it is all a matter of taste. I learn that snails are considered a delicate dish in Paris! This reminds me of a story about a foreigner visiting this country. His friend wished to secure for him a fine café dinner, and they sat down to celery and bouillon; and then after clearing the table the waiter brought in a piping-hot lobster with the accessories. The foreigner pushed back his chair and remark-



Heartsease, *Polygonum persicaria*. Photo by J. M. Buchanan, Franklin, Tenn.



Boneset, *Eupatorium perfoliatum*. Photo by J. M. Buchanan, Franklin, Tenn.

ed, "I ate your grass, I drank your slop, but I'll be doimed if I ate you bug!" I find that I am getting off my subject.

When I had secured queens ready for the market I was confronted with the problem of advertising—a subject which I have since found very interesting and deep. I tried small spaces in bee journals, and expected a deluge of orders; but in this I was again disappointed. I was unknown; and if it had not been for the fact that I secured some advertising space in exchange for bee notes in a farm paper I would have come out of the little end of the horn. At a time when I was a little discouraged, the late Charles F. Muth visited at our home. He looked over my outfit; and before he left he said, "Walter, for the present I can use all the queen bees that you can produce." His kind and gratifying words can never be forgotten.

Well, I found myself so fascinated with the bee business that I had promised myself that, if I were rewarded with a first-class apiary, and established in the queen-rearing business, I would never ask for anything further, especially if these things were gained by the sweat of my own brow. Now, things were different again. I began to have a longing to go into the supply business.

I spent one winter with the A. I. Root Co., and the more I learned about it the more it seemed to fascinate me; and the very odor of pine lumber and beeswax seemingly intoxicated me. I had met many beekeepers, and I thought them as a class the best people on earth. I have never changed my mind on this point. My opportunities at home were good, but I was worried about getting in the supply business. I had seen good men fail after starting with considerable means while others prospered; but I felt that I could succeed if I only had the opportunities, but there seemed to be no openings. However, the darkest hour is just before day, and I had even looked over the map deciding that, if I had my choice, I would locate in Indianapolis. I had occasion to visit friends in Indianapolis, and just naturally hunted up the local bee-supply dealer, Mr. Frank L. Dougherty.

After cordially shaking hands in the attitude of the bee fraternity he confided to me that he had been promoted to more extensive interests, and that his supply business was for sale. This brought me to a fever again, and I learned that another man was negotiating for the business—a man with much more means than I could



Goldenrod, *Solidago*. Photo by J. M. Buchanan, Franklin, Tenn.



Aster, *Aster multiflorus*. Photo by J. M. Buchanan, Franklin, Tenn.

control. I returned with a heavy heart, exchanged a few letters with Mr. Dougherty, resulting in his giving me the preference—a kindness that will be lasting in my memory. I conducted it for twenty-six

years with some hardships, some hard work, but, after all, a quarter of a century of real pleasure. And I still think that the beekeepers are the best people on earth.

Indianapolis, Ind.

THE FALL FLOW

BY J. M. BUCHANAN

The late summer and fall flow is an important factor in the next season's honey crop; for strong colonies at the beginning of the spring flow are dependent on successful wintering, which, to a great extent, is insured by having the hives full of good stores and young bees at the beginning of cold weather.

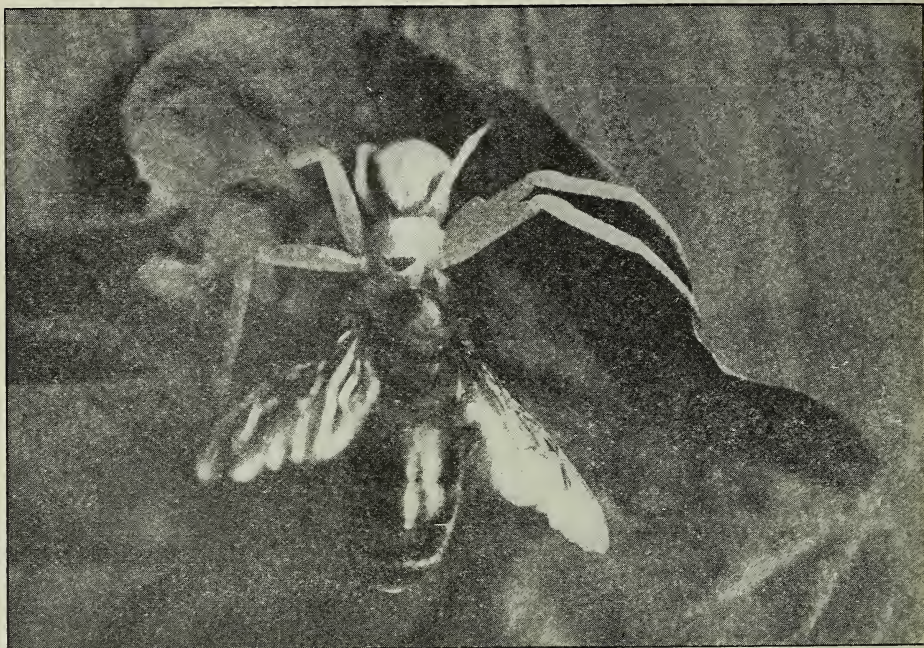
If there is no fall flow to induce late brood-rearing, the colony goes into winter with old bees which have not sufficient vitality to survive the cold and confinement of winter; and if stimulative feeding ever pays, it is at such a time as this, for too much importance can hardly be placed on the matter of late rearing of brood.

There is quite a variety of plants throughout the central states which furnish nectar and pollen during the late summer and autumn, and a short description of some of the most important is here given.

Polygonum persicaria, heartsease, smartweed; a prolific nectar-bearer in low lands and moist soils. The honey is of good flavor, and light amber in color; blooms in August and September.

Eupatorium perfoliatum, boneset. On the high lands of the central states this plant furnishes a good crop of surplus honey of fair quality, light amber in color, and of rather high flavor. It grows 2 to 4 feet high and has white flowers in broad flat heads, in August.

Solidago, goldenrod. There are more than 75 species of goldenrod found in the United States. However, not all of these are of value as honey-plants. There are several good ones which are widely distributed, and which produce a fine quality of honey, mostly of a golden color. They bloom during September and October. Two species are shown in the illustration.



Crab spider caught in the act of killing a bee.

Aster, aster. Several species or varieties are of value as honey-plants, some producing much better honey than others. Aster honey is very quick to granulate, and is rather strong in flavor. It is not usually considered very good for winter stores, especially in the North, where the bees are confined for a long period. There is generally a sour smell about the apiary when the bees are at work on aster. The bloom

begins in September, and continues until after frost.

Other late-flowering honey-plants which might be mentioned are buckwheat; alsike and sweet clover; cotton, cowpeas, wild sunflowers. The common ragweed, *Ambrosia artemisiaefolia*, is one of the most prolific pollen-bearing plants among the late bloomers, although it furnishes no nectar.

Franklin, Tenn.

THE TRAGIC SIDE OF BEE LIFE

BY WILLIAM BEUCUS

When we turn to the daily life of the bee and see how its fructifying mission is beneficent, how it is called to the delicate fragrant blooms which crown the vegetable kingdom, and which are a synonym of loveliness, we are quite overcome, and exclaim at the transcendent beauty of it all; but when we find lurking at the portal of the lily of the field a monster whose only mission is to seize and destroy the bee, to hold it in a vise-like grip while it calmly punctures the living tissues of its victim, the face of nature loses its charm, and its ugliness is unveiled.

The labor of the bee is kindly and constructive; and yet it must, at every trip,

face the pirates of the earth and the air whose labor is cruel and destructive. One of these monsters is shown in the photo. It is a white spider which lurks on white blossoms. Its duplicate in form, though colored yellow, lurks on yellow blossoms. This spider spins no web; but with arms outstretched, it patiently awaits the coming of its only victim, the honeybee. It does not spring, but waits until the head of the bee is in exactly the right position between the outstretched arms, and then, with a swift movement, it seizes the bee in a powerful embrace and bites into the neck from the upper side, as shown. The bee has no chance to defend itself, and falls an easy

victim. The particular spider pictured was caught in the corolla of the wild white lily. It was rudely driven out, clinging tenaciously to its prey, on to a green leaf, carried into the house, the leaf pinned to a box, and the photo taken.

Several years ago one of these spiders was compelled to release reluctantly its victim; and it was then carried to a populous colony and dropped at the entrance among the bees. They seemed to recognize their enemy, and drew away. After considerable irritation, one bee, more valiant or indiscreet than the rest, attacked the spider viciously. Instead of showing fear, the spider seized the bee in a strong grip and bit it on the under side of the thorax. The bee was thus in a position where it could use its sting. But it wilted as though paralyzed by a poison.

This observation may prove interesting to those entomologists who assert that the spider secretes no poison. I then caught a worker, and, holding the spider securely, held the point of the bee's abdomen on to the spider that the sting might be made effective in retaliation. But the sting seemed to be unable to penetrate the skin of the spider, although many efforts were made. It seems, then, that, though the spider takes the precaution to seize the bee in the safest way, it would not be in danger, even if the bee were seized wrongly.



Spiders which kill honeybees. 1, black swallow-tail butterfly (*Papilio asterias*), killed by crab-spider *Misumena vatia*, 2. 3, dragonfly (*Celithemis eponina*), captured by *M. vatia*, 4. Photographed by John H. Lovell.

To gratify my own feelings this spider was despatched, as was also the one shown in the photograph.

Cadott, Wis.

[Chas. Hecht, in the Oct. 15th issue for 1907, describes this same spider, and an illustration is given showing the spider and its victim on a dandelion blossom. Mr. Lovell, in his article which follows, shows a spider which is, no doubt, the same one, killing butterflies.—Ed.]

FLOWER SPIDERS WHICH KILL HONEYBEES

BY JOHN H. LOVELL

In gathering nectar from flowers a honeybee would seem to be in no danger; yet often it meets with a tragic end. Here lying on the flat top of the flower-cluster of the hobble-bush is a dead bee. Lift it up and you may discover that the head is firmly grasped by the mandibles of a white spider, which, rather than release its prey,

permits itself to be dragged from its hiding-place. Except for a red stripe on each side of the abdomen, it is wholly white, so that it cannot be easily distinguished from the small flowers among which it lives.

It is one of the crab-spiders (*Thomisidae*), so called because, like a crab, they walk sidewise or backward more easily than



Dr. Neville's summer and winter repository for bees.

forward. These spiders lurk among flowers, usually in dense clusters of small flowers like the meadow-sweet, the sumac, the elderberry, and viburnums, and pounce upon the unsuspecting insect-visitors. The two commonest species are *Misumena vatia* (shown in the photograph), and *M. aleatoria*. They not only catch bees and flies, but also wasps and large butterflies and dragonflies, as the illustration shows. The poison is very virulent, or otherwise they would be carried away by such strong-winged insects. These spiders are common, and kill a good many honeybees.

On the 16th of July I noticed a bumblebee gathering pollen on a flower of the wild rose (*Rosa lucida*). My attention was for a moment diverted, but was again quickly recalled by the loud buzzing of the bee. A white spider had leaped upon its back and grasped it with its mandibles just behind the head. At first the bumblebee struggled violently, but gradually its efforts became more feeble and soon ceased. The spider now dragged it over the edge of the flower to the leaves beneath, there to dine at its leisure.

Waldoboro, Maine.

A COMBINED SUMMER AND WINTER SHED FOR CITY USE

BY DR. R. NEVILLE

The illustration shows my bee-house which I use both summer and winter here in town. In the summer the hives are 28 inches above the floor where they are placed during the winter. This means that, during the summer time, the entrances are at least four feet from the ground so that the bees are usually above the head by the time they are out of my lot.

The lower part of the shed is of concrete blocks, resting on a foundation wall four

inches high, through which openings are left for the winter entrances. The shed is 40 feet long and 4 feet wide outside measurements; 32 inches in the clear on the inside.

After the hives are placed down on the floor inside for winter, we secure boxes that have been used for shipping panes of glass; fill the three-inch space inside with dry straw, and place it over the top for a covering—finally putting on the boards used for

the summer stands. In this way we can winter strong three-frame nuclei without losing one, making sure, of course, that the combs contain plenty of stores.

A strip of rubberoid roofing-paper covers up the openings for the fronts of the hives in the summer time.

After 35 years of experience we have found this shed the most convenient ar-

rangement of anything we have ever tried for city beekeeping.

Walkerton, Ind.

[Dr. Neville is an old soldier who served three years in the Civil War, and who marched with Sherman to the sea. His bees are kept mainly for pleasure, but he produces some 500 to 1000 pounds of honey a season from his bees on his back lot.—Ed.]

MAKING SURE OF SUPERSEDURE

BY F. A. HARRISON

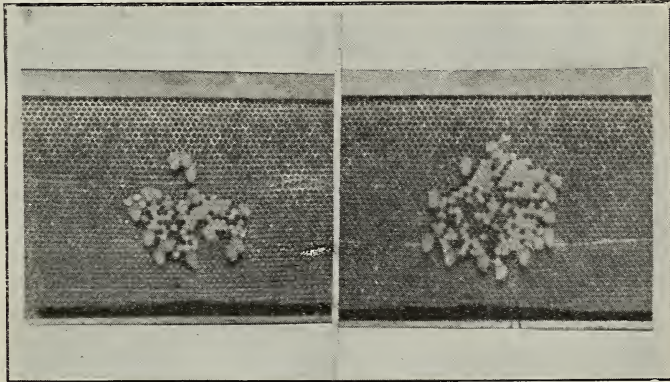
The photograph shows both sides of a frame of brood which, according to my count, had twenty-eight queen-cells. This comb belongs to a new colony which swarmed May 17, 1915, and was placed in a new hive with full sheets of foundation. This is absolutely all the brood in this hive. Can you tell me why so many queen-cells are built by a new swarm?

The hospital at this station has eight colonies which are kept inside the walls of this institution. I have thought seriously of sending a photo to compete for a prize showing how bees can be kept when closely surrounded by men at work. However, if our apiary increases as much next year as it has this I am afraid we shall have to move outside.

Fort Leavenworth, Kan.

[This was a rather unusual occurrence.

We assume that this was a prime swarm—that is, the first swarm—therefore that it contained the old queen. Probably this old queen began to fail soon after the swarm



Twenty-eight queen-cells built by the bees of a new swarm.

was hived. The fact that she had only a small patch of brood on each side of one comb a month afterward is pretty conclusive evidence that she had all but stopped laying. The bees decided to supersede her, and then "got busy" with what little brood they had.—Ed.]

A PLANT THAT FORETELLS THE ALFALFA HONEY CROP

BY GEO. M. HUNTINGTON

I am sending two snapshots of wild buckwheat, *Eriogonum fasciculatum*, a very important honey-plant to the beekeepers of this valley wherever it is in the vicinity of their apiaries. It comes into bloom just before alfalfa, and is a good indicator of crop prospects for the season. Coming just before alfalfa it prepares the way for good results from the alfalfa. It starts the bees into the supers and provides the wax scales for comb-building. If there is a good flow

from the wild buckwheat the condition is sure to be such that alfalfa will also produce well.

Swarming is about over at the height of its bloom, and the earlier swarms have made progress during the buckwheat flow to where they will be storing surplus when alfalfa starts. Like the cultivation of buckwheat it is the best in the early part of the day, and in cool weather (not cold) it gives the best results. Two or three hot days at



Wild buckwheat is a forerunner of alfalfa in parts of California.

the finish will wind it up, and is just what the alfalfa needs to come on with a rush. The season of 1914 was like this, and the wax-workers were not "laid off" between the flows.

In 1915 the wild-buckwheat flow was

very short, as was also the first flow of alfalfa.

Wild-buckwheat honey is dark in color, but not as dark as its cultivated cousin. The flavor is also much milder.

Bishop, Cal.

GETTING READY FOR COLD WEATHER

BY D. C. ANDERSON

I have wintered bees for the last three winters as follows: I built a platform 4 ft. 6 in. by 9 ft., about eight inches from the ground. On this I placed ten hives, four fronting east, four west, and two south, and closed the entrances to about six inches in length by $\frac{3}{8}$ in depth. On the fronts of the hives over the alighting-board I put a 1 x 6-inch board flatwise.

The side-boards are two boards nailed with cleats one inch from the end, set on the outer edge of the board over the alighting-boards. One-inch boards the right length are tacked on the ends against the cleats, leaving the nailheads out far enough so they can be drawn out when you wish to take the case down.

The side-boards should be a few inches narrower at the north end to carry the water off. I pack with leaves, having plenty of them, tamping them tightly all about the hives. Sometimes I fill the supers with leaves, and sometimes put the covers on and pack the case full of leaves; then cover

with boards and roofing-felt. As the board over the alighting-boards projects somewhat I nail a narrow board on the front that keeps the storms from driving in the hives.

My bees have always wintered well in this case, never losing any excepting from starvation or loss of queen. Bees get a flight every month in the winter here; but we also have zero weather. It seldom lasts more than a few days.

I have also a tenement hive six feet long, spaced for four colonies with 12 to 14 Hoffman frames. The top is spaced for ten-frame supers. The divisions are of inch lumber, with a 5 x 5-inch hole in the center, over which is tacked excluder zinc on each side, so the queens cannot reach each other. The entrances are north, south, east, and west.

For wintering I tack newspaper on the sides and ends; nail a wide inch board over the paper, fill the supers with leaves, and finally cover to keep the storms out.

I have had this hive four years, and for three years it was the best honey-producer in my yard; but this last summer my bees got the swarming fever, and this hive will not give much surplus. The first winter I

tried to winter all four colonies; but the colony facing north disappeared. I do not know that it would have occurred again, but I never tried to winter any bees in that compartment afterward.

Boicourt, Kan.

SELF-TRIPPING OF ALFALFA

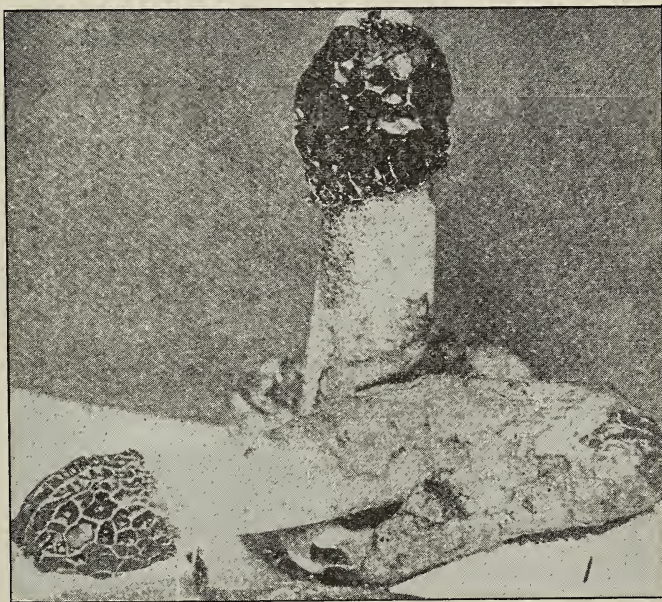
BY J. H. LOVELL

Alfalfa sometimes sets seed freely, even in the absence of insects suitable for tripping the flowers. The Bureau of Plant Industry has recently shown (1914) that the flowers often trip automatically. Alfalfa has explosive flowers—that is, when the keel is depressed the stamens and pistil fly forcibly upward with a snapping sound, and a little cloud of pollen is thrown into the air or against an insect. At Chinook, Montana, 33 out of 57 flowers marked on one plant became self-tripped and set 21 pods. On a second plant 36 flowers out of 64 tripped automatically and produced 16 pods. Self-tripping is influenced by temperature, humidity, and bright sunshine. A single alfalfa-plant was screened from insects for ten days or longer until it was in full bloom. The screen was then removed for 15 minutes on a very warm day. The flowers quickly began exploding with a snapping sound at times three or four being heard simultaneously. It was estimated that more than half the flowers were self-tripped before the screen was replaced. In the West, automatic self-tripping probably results in the production of as many pods as insect pollination. This observation is important, since it explains the production of a large crop of seed in the absence of insects.

THE ODOR OF GOLDENROD NECTAR.

While the bees are bringing in nectar from the goldenrod, the whole apiary is filled with a disagreeable sour smell which, on a calm evening, may sometimes be no-

ticed at a distance of a hundred feet. The odor of goldenrod nectar has been likened to that of decaying carrion, but this is a mistake. When such an odor is present it is usually caused by one or more stink-horn fungi. One autumn I noticed in my beeyard a strong carrion-like odor, and careful search soon revealed several of these fungi growing near an apple-tree. At least a dozen flies were busily feeding on the semi-liquid mass. Where there is decaying



The stink-horn fungus (*Phallus impudicus*) sometimes grows up in the apiary in the fall.

organic matter the stink-horn fungus frequently spring up in the fall. They exhale a fetid scent, and often mislead the beekeeper into the belief that this odor comes from the hives. The stem is hollow, and the cap-like top deliquesces into a sticky, syrupy mass which is very attractive to carrion-flies. They devour great numbers of the spores, which produce a kind of diarrhea, and pass through them unharmed.



The Tri-state Field Me

ed. Certain fungi thus, like flowers, make use of insects to distribute their spores. The illustration shows two specimens of this fungus (*Phallus impudicus*).

Waldoboro, Maine.

[Every fall we receive a large number of letters from beginners who describe a pe-

culiar smell when the hives are opened. Is it not possible that the odor so frequently described as "sour" *does* come from the raw nectar of goldenrod, and that the odor resembling decaying animal matter is from the fungus described by our correspondent?—Ed.]

THE TRI-STATE FIELD MEET AT HAMILTON, ILL., SEPT. 7 AND 8

BY E. R. ROOT

This was one of the most enthusiastic meets I have ever attended. The day and place of meeting, about two miles out from Hamilton, were ideal. The bees were working heavily in the fields at the time; and, all together, the conditions could not have been better. Our hosts, the Dadants, and that means quite a family of them, including sons and sons-in-law and daughters and daughters-in-law, left nothing undone to make the occasion a success; and those who had the privilege of attending felt that they were most royally entertained.

The picture shows the original Dadant homestead where the late Charles Dadant and his son, Camille P. Dadant, began their beekeeping careers in the early '60's. At the right is the bee-yard consisting of those immense Dadant colonies in Dadant hives, Quinby size. Some of the old original hives were still in use. At the left is a portion of the Dadant foundation-factory and work-shop, where tons and tons of the

finest product are turned out. It is unnecessary for us to state that the Dadant foundation is known the world over. Every one was given an opportunity to go through the plant in groups of twenty-five and fifty at a time, piloted by one of the Dadants.

In this connection I cannot forbear making the observation that the firm of C. P. Dadant & Sons is organized very much like the A. I. Root Co. They are both strictly family affairs, made up of sons and daughters and sons-in-law and daughters-in-law. Each member of the concern is in charge of a department of his own. Mr. C. P. Dadant seems to be the presiding genius, and, as he said to us, he is "taking life easy," and letting the boys run the business. In that respect he is following the example of A. I. Root. Mr. M. G. Dadant and his oldest sister have direct charge of the *American Bee Journal*, which the Dadants purchased a few years ago of Mr. G. W. York. Messrs. L. C. and Henry Dadant and a son-



The Tri-state Field Meet at Hamilton, Ill., Sept. 7 and 8.



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in-law are connected directly with the manufacturing end of the business, and that takes in the various out-yards and the production of honey as a business.

We hope to present the pictures of the members of this interesting family later to our readers.

Dr. E. F. Phillips and myself arrived in the forenoon. Already groups of beekeepers were in the yard. In one case Mr. L. C. Dadant had opened up one colony that had a plain case of dead *drone* brood—the very thing that was described in GLEANINGS for Sept. 1, page 695.

The beekeepers assembled here and there, opened up some of those big colonies, and discussed bees and methods of manipulation. At the noon hour the whole crowd, something over one hundred, sat down to a most hountiful repast. This part of the program was a great success, and was so pronounced by every one who had a chance to sample the Dadant hospitality.

After dinner the beekeepers were called together in convention by Frank C. Pellett, at which time we listened to some informal talks by Dr. E. F. Phillips; Mr. C. P. Dadant; Mr. A. L. Kildow, of Illinois, state bee inspector, and Mr. Frank Coverdale, the sweet-clover expert, of Iowa, well known all over the United States.

Mr. Coverdale, of course, was given the subject of sweet clover. He is not only an extensive beekeeper, but a successful farmer. He has done, perhaps, more than any other man in the United States to demonstrate the value of sweet clover, not only as

a forage plant for bees, but for cattle and hogs. He grows great quantities of the legume, and his success has been so great that it has attracted the attention of state experiment stations and the United States Department of Agriculture.

Mr. Coverdale had just sold a lot of cattle that he had raised, and these cattle brought \$1.00 per 100 lbs. above the general market. He explained that he secured this extra price because the cattle were so sleek. Sweet clover, he said, is not only a fine forage for bees and cattle, but it keeps the animals in splendid condition. It has the same feeding value as alfalfa, and the milk and butter from it are just as good.

Some one present asked him about getting cattle and hogs started on it. He recommended letting them loose when the plants are young and tender. For planting he advised putting in with early oats. The sweet-clover roots penetrate the soil deeply, and after two years die, allowing the moisture from beneath to come to the surface.

Asked as to the time when to cut it, he recommended that it be allowed to grow till it is 22 inches tall. The mower should be set so that it will not cut close to the ground—high enough so that some of the leaves will be left. Otherwise the plants will die.

Later in the afternoon the crowd was conducted by the Dadants to the big dam that furnishes 75,000 electrical horse power. The dam and the power plant are well worth seeing.

That evening we assembled—that is, those of us who were left—on the veranda of the

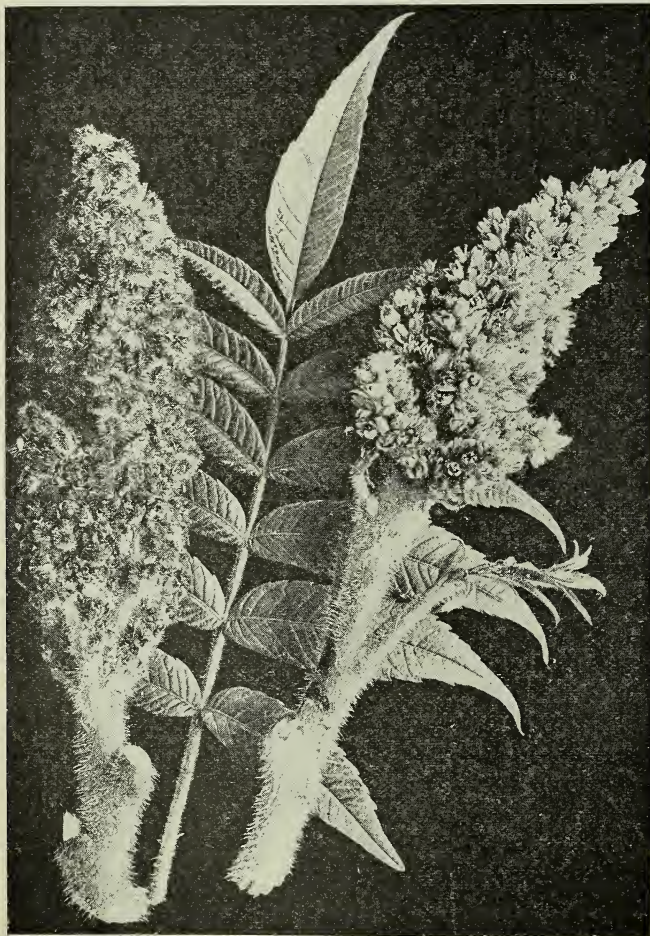
beautiful home of C. P. Dadant, which overlooks the Mississippi, the lake, and the great dam of the Keokuk Power Co. The time was taken up with impromptu speeches by Dr. E. F. Phillips, N. E. France, C. P. Dadant, and E. J. Baxter. It seemed appropriate to speak of the life and labors of men who have distinguished themselves in the beekeeping world—especially those who have passed away. Mr. F. C. Pellett, the presiding officer, called on Mr. Dadant to give some reminiscences of his father. He very modestly declined, saying he did not consider it either proper or appropriate to eulogize his own father, the founder of the firm of Dadant & Sons. Mr. Pellett then called on Dr. Phillips to respond to a toast, "Dr. Miller." There is probably no greater admirer of the Marengo beekeeper than

the representative from Washington. He spoke of the delightful visit he had had at Marengo, of Dr. Miller as a man, as a beekeeper, of his modesty, of his methods of comb-honey production, of swarm control. Mr. Pellett then called on your humble servant to speak of the life and work of the late W. Z. Hutchinson and the Rev. L. L. Langstroth. I felt that I was hardly big enough for the task, but I responded as best I could. But in closing I could not forbear referring to the sterling qualities of the late Charles Dadant; and later the chairman succeeded in drawing from Mr. C. P. Dadant, his son, a few further remarks. I was then followed by N. E. France, who spoke of his love for W. Z. Hutchinson, and of one man, Mr. Adam Grimm, who left his impression all over the state of Wisconsin,

for Mr. Grimm actually established a bank with the money he earned by keeping bees. Mr. Baxter then gave some further reminiscences of Mr. Charles Dadant. The talks were followed by some music by Miss Dadant, who was encouraged again and again.

THE INSPECTOR'S MEETING NEXT DAY.

Dr. Pammel, Botanist at the Iowa Agricultural College, read a paper on the subject of honey-plants and the importance of bees to the fruit-grower. A large number of specimens of plants, including heartsease, asters, Spanish needle, ironweed, etc., were brought in for his identification. This part of the program was interesting, as many local beekeepers were unable to identify many of the plants. There were several species of heartsease as well as of knotweed and smartweed. All of these Dr. Pammel named. Heartsease and Spanish needle were the plants that were, of course, furnishing so much



Staghorn sumac. *Rhus typhina* L. Photographed July 28, 1915, at Waldoro, Maine, by John H. Lovell. Pistillate flower-clusters; in cluster on right the flowers are in bloom and are green in color; the cluster on left representing a later stage after the blooming period has closed, has turned crimson.

honey this year in the Mississippi Valley. He recommended that every beekeeper be familiar with the plants in his own locality that furnish honey. He called attention to the very intimate relation between bees and plant-life, and stated that every fruit-grower should keep some bees as a side line.

Dr. Pammel is doing some special work at the Agricultural College in classifying and identifying the principal honey-plants of the United States. If the result of this work comes out in bulletin form we are sure it will be of great value.

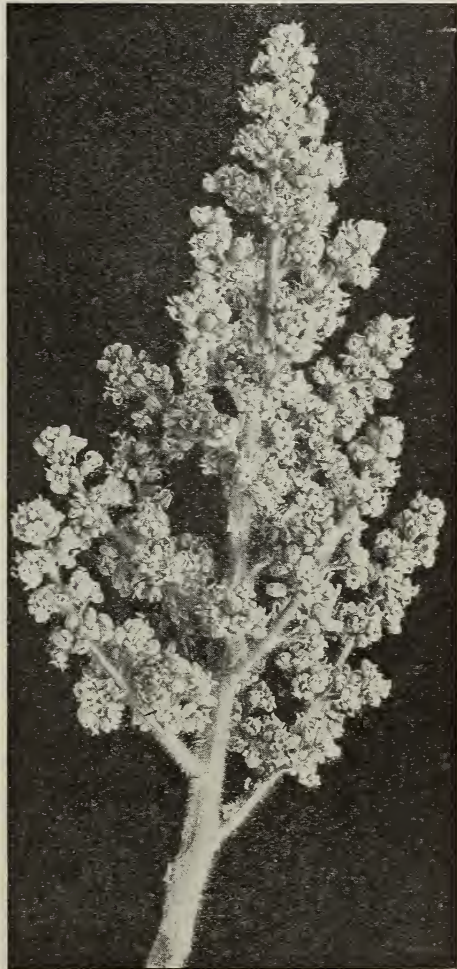
In the afternoon Dr. Phillips gave an address on general bee-inspection work. When he first came into the government work, only twelve states had bee-inspection laws. Now there are thirty states out of forty-eight that have some form of bee-inspection work. Most of the southern states have no laws, largely because bee diseases have not made any progress in the South. This is not because foul brood can not make rapid headway there, but rather because there are but few or no interstate shipments of bees from infected territory in the southern states. But the time will come when these states will need protection.

What is needed in the South, he said, is some one to teach modern methods of keeping bees. In this connection he claimed that it is the duty of a bee-inspector not only to treat bee-diseases but to give instruction concerning them. This part of the work is very important. Where bee-inspection laws have been properly enforced, there has been a marked decrease in the amount of bee-disease.

A bee-inspector should teach the importance of two things—first, plenty of bees in time for the harvest, and that means good wintering and good springing; second, keeping the bees together, and that means not to let them waste their substance in rictous living—or, more exactly, swarming. There is great need of general extension work in the southeastern states where there are more bees per square mile than anywhere else in the United States.

A paper from Mr. J. E. Crane, of Middlebury, Vt., who was absent, was read. He explained that the work of an inspector is not always pleasant. On the other hand he makes many pleasant acquaintances. Not knowing what Dr. Phillips had said, he went on to state that the inspector should instruct as well as inspect. He spoke of the difficulties of looking through hives when the frames were all glued together, or, worse, when the combs are built on no frames at all. He thought the states should

compel the use of modern movable-frame hives. He spoke of the difference between American and European foul brood; of the difference in treatment. The European type seems to move in the air. The American disease works slowly, but the European spreads with great rapidity. Robbers carrying diseased honey is not the only way that foul brood may be carried. Bees in their ordinary flights often make mistakes and get into other hives. In other words, drifting is a very common means of spreading disease. The ravages of European foul brood can be greatly mitigated by introducing a good strain of Italians, and keeping all colonies strong.



Staghorn sumac. *Rhus typhina* L. Photographed July 28, 1915, at Waldoboro, Maine, by John H. Lovell. Stamine flower-cluster.

Following this paper there was considerable discussion on the peculiarities of European foul brood. Mr. L. C. Dadant told how European foul brood in several apiaries had seemingly been carried by the queen. Several of the inspectors present, including Inspector A. L. Kildow of Illinois and his deputy, Inspector N. E. France of Wisconsin, and Inspector F. C. Pellett, had observed that European foul brood had been carried through the queen.

I put the question squarely to Dr. Phillips, who, up to this point, had not volunteered an opinion. He said frankly, "I do not know." In some private conversation with him afterward he thought there might be a chance for a mistake. While he did not

deny that it might be so carried, he thought we should do some more work covering a longer period before coming to the definite conclusion that queens can transmit European foul brood.

Mr. France, in one of his talks, went on to state that it had been claimed that American foul brood could be carried through foundation. He had always argued that it could not be so transmitted; but to satisfy himself he had some comb foundation made out of the rottenest combs he had even seen. This was placed in 62 different colonies, all of them healthy, but not one of them developed disease. Practically all of the inspectors agreed that American foul brood is not carried that way.

A THREE-FRAME NUCLEUS, AND WHAT IS POSSIBLE TO BE DONE WITH IT IN A SINGLE SEASON

BY R. J. T. MUCKLE

!On page 414, May 15, there is a picture of the "bonanza colony," and a brief mention of what was done with a three-frame nucleus and queen. On page 474 I called attention to this wonderful exploit, and suggested that there was a mistake in the date, as the letter sent us was evidently written carelessly and in haste. I am glad to tell you, however, there was no mistake, and that our good friend Muckle did exactly what he describes during 1914 with a three-frame nucleus received May 25. I asked him to give us full particulars of this wonderful increase, and he has kindly written it out in full as below.—A. I. R.]

Although a very busy man from 4 A. M. until dark I shall still try to answer your questions.

The whole thing was to me an experiment, or, rather, a continuation of an effort to prove Alexander wrong except in the plurality of queens. I succeeded only in proving him right, which was really what I *was* after.

From the afternoon of May 26, 1914, right through the season, I fed a gill of syrup (3 water, 1 sugar), not only to the original colony but to each swarm (artificial) right through the season up to October 20, when I gave those not sold 10 lbs. of sugar by measure to 4 by measure of water ($2\frac{1}{2}$ sugar to 1 water by measure). The queens being all young, and from the grand one accompanying the nucleus, simply filled their hives to overflow with young, and I was afraid the syrup would fail them before the spring of 1915, they having nothing else save the pollen in the two outer combs.

They came through in extra strong shape, and they withstood the worst spring and early summer I've seen in my life. So much for helping them and giving syrup for winter.

On May 26, 1914, I received a three-frame nucleus (value \$3.75) and a three-banded Italian queen (\$1.00), marked "a good queen." One frame was solid capped

worker brood, and the other two frames were fully half the same—not a drone-cell in the lot. The frames were swarming with workers and not over twenty drones; and the queen, a lively medium-sized one, was laying in 30 hours from arrival. She laid 37 combs full, twenty of which her gang drew out of full sheets of light foundation.

We certainly had an abnormal flow from dandelion. I never saw so many in my life before (and it was the same this year); wild fruits on a par, and wild mustard (in this country a good yielder), several hundred acres within two miles; also 20,000 acres of swamp land beginning one mile east.

On June 5 I put a queen and one frame of hatching brood in a new body, filling up with full sheets of foundation on wired frames. On this I placed a wire excluder, then a body full of drawn comb. Above this was a wire honey-board having two bee-escapes. Then having shaken two-thirds of the bees off the frames I placed the old body on top and the job was done.

Eight days later I cut out all but five queen-cells, four of which I put in queen-cages; and four days after I drew out a plug in the front end of the wire honey-board, putting on a five-inch-square alighting-board, and provided the top story (hatching-nest) with a hall door. My first queen mated; and when laying I moved to

a new stand with two frames of hatching brood, and bees clinging thereto. I then released a virgin, which was lost, and another, which was also lost (air full of dragon-flies); but the fourth mated, and it, too, formed a new colony. No. 5 was malformed, so I killed her.

On June 15 I switched again, this time by taking combs of brood out of the nest and putting it in the top story, filling their

places after drawing those left in the nest to the center of the body with full sheets, repeating this on the 25th and again on July 4.

That's all there is to it; but whether you will understand from my way of writing is another thing. Could I talk instead of writing I could make myself understood easier.

Clandeboyce, Man.

THE BEEMAN'S OPPORTUNITY

BY L. M. GRAVELY

Beekeepers as a rule do not realize what an opportunity they have by way of securing free advertising. If properly managed, one can even get pay for advertising his own business. The rank and file of the honey-consumers never understand the marvelous things of interest concerning the bee and its works. It is up to us to give them, through the medium of the newspapers, live, interesting sketches of the bee and honey industry. Anything unique, original, or interesting is acceptable. Of course, one must not give the article the appearance of advertising or it will "queer the game." It is not necessary to say that you have honey or bees to sell. If you have bees they will know that you have honey.

I produce a ton of honey. The word "ton" seems much bigger when applied to honey than does 2000 pounds. So does half a ton, or a quarter, for it seems much bigger to most people because they were familiar with it only in spoonful lots when given to cure a cold.

Then, again, the average person cannot get away from the belief that you are taking your life in your hands. Most beekeepers can amaze the public by the way they handle their bees. One of the most successful plans I ever tried in the way of advertising was the use of the accompanying illustration. More for the fun of it than anything else, I made this picture last summer, showing a real live swarm of bees on my head.



A hat that is truly alive.

Ringgold, Va.

A NEW ABSORBENT COVER

BY G. A. BARBISCH

My bees are wintered in the cemented cellar under the house. This cellar has good ventilation, the thermometer seldom varying more than four or five degrees all winter, no matter how cold it is outside. With the exception of one season I have had no loss

whatever in this cellar. My bees are stacked up in tiers of four, but every spring I found that colonies in the lowest tier next to the floor had moldy combs and were always the weakest in bees.

Last season a certain bee-supply com-

pany sent me a sample of a new absorbent cover made from flax fiber, claiming these covers would absorb all moisture in the hive, and that no more moldy combs would be found. I at once ordered enough of these combs for all my hives. They were put on the hives two weeks before the bees went into the cellar. Here I might also mention that all our bees are covered in the fall with tar paper, just as soon as we can take off the extracting-super, and we think it pays well. Bees that are covered with tar paper can be kept out longer than if not covered. Then, too, if an unexpected snow-storm comes during the night, your bees are still dry and snug. Very often we have stormy weather in November, while in December it is nice, and bees still can have an occasional flight. These are the reasons why we cover our bees with tar paper.

But, to go back to my subject, seventy-five colonies went into winter quarters Dec. 10. I left off the regular covers and substituted these flax covers. They were confined just four months, and after examin-

ing in the spring I was gratified to see that, among the seventy-five colonies, not a single wet or moldy comb was found. All the colonies were alive, and all the hives were as clean and dry as they could be. After all those four months of confinement, about two quarts of dead bees were swept up in all.

This proves beyond a doubt that these flax-fiber covers are of great value where bees are wintered in the cellar, and especially where a cellar is damp and cold. They are also fine outside for spring protection providing one uses the metal-roof covers. If used with the excelsior cover they are of no value, as they are the same width as the hive. If a hard rain comes it strikes the edges of the cover and soaks the cover like a sponge. They cannot be left on all summer, as the bees glue them down so that they break when you want to take them off. As I said above, however, when one winters his bees in the cellar they are indispensable, and the cost is so low that it pays well to use them.

La Crescent, Minn.

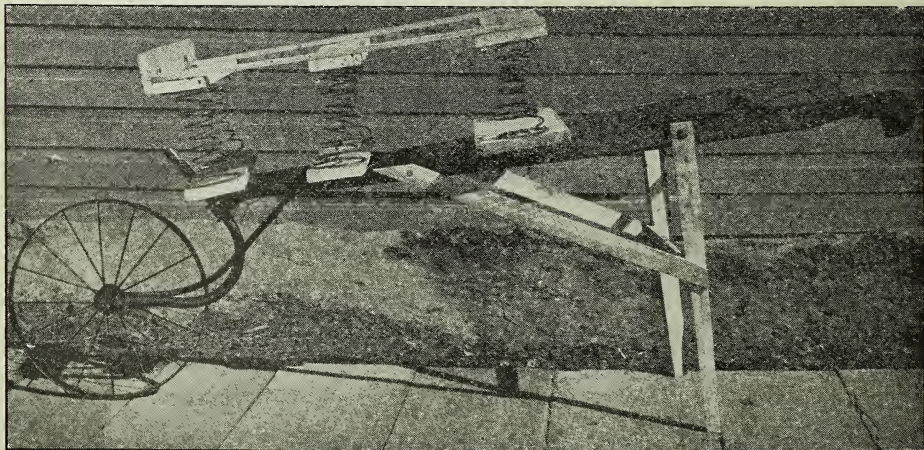
A WHEEL HOE CONVERTED INTO A SPRING WHEELBARROW

BY F. J. LEE

The picture shows my spring wheelbarrow for taking bees in and out of the cellar. I used to hire a man to help me, and one of us had to go backward some thirty feet through the furnace-room to the bee-cellar. With the spring barrow I can take the bees out easier alone.

Every beekeeper has or should have a garden, and a wheel hoe or seeder to work

it. Here is how to change the wheel hoe to a wheelbarrow. Turn it bottom side up; take off the hoe or rake; take off the handles; turn them over; bolt them on again. Take two sticks for legs, and two pieces of lath for braces. Two small bolts will fasten the legs to the handles, and four one-inch screws the braces. Now cut six pieces of board 18 inches long. Hunt up six old



A light spring wheelbarrow made from a wheel hoe—just right for carrying hives into the cellar.

springs, and put them between the boards and fasten them well with spacing-staples. Two pieces of lath on each side will hold the boards in place. Fasten the bottom boards to the handles with some hay-wire; put on a narrow piece for a dashboard, and

the spring wheelbarrow is complete. I was less than half a day making it, and I can change it back to a wheel hoe in less than five minutes. Mine weighs complete only 22 lbs.

Lee Valley, Ont., Can.

HOME-MARKET PROTECTION

BY W. I. LIVELY

Of all the problems which confront the beekeeper, that of marketing his crop is one of the most trying and difficult. Honey is not the staple article of food that it should be; but the campaigns to educate people to its value as a food are doing much to increase the consumption; and more intelligent methods of marketing would greatly relieve the situation. Beekeepers generally pay too little attention to their local markets. There is too much of a tendency to rely upon the wholesale business to place the crop before the consumer. It does it after a fashion, but at a loss to the producer and a higher cost to the consumer, both of which militate against the business of beekeeping.

Some time ago, through conversations with traveling salesmen, I learned that Arizona honey was selling in California, and California honey in Arizona, both at prices which would spell bankruptcy to the producer if they continued. Practically, the beekeeper was paying freight and middleman's profits for the privilege of selling his product in a neighboring state. The same thing is being done constantly all over the country. The shorter the distance and the fewer the middlemen between the producer and the consumer, the greater the profits to the producer, and the smaller the cost to the consumer.

Now, that does not mean to sell at any old starvation price in order to unload your crop at home. *Above all, protect your home market and protect your fellow beekeeper.* During the seasons of 1912 and 1913 I worked up a nice market in a city some distance from my home. In the fall of 1914 the war and other causes depressed the shipping market. Other beekeepers, some of whom I knew, and who are fine, well-meaning fellows, followed my footsteps and flooded the city with their brands at a price with which I could not afford to compete. The result was that I lost practically all my trade there. I found the method of selling was something like the following: Mr. A. took some samples to a merchant and offered honey for sale. The

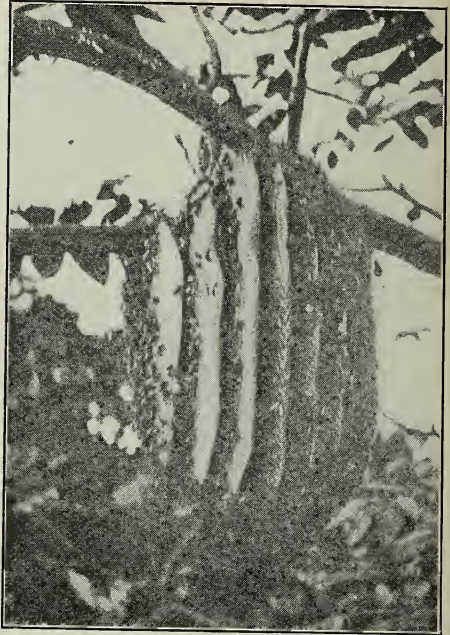
merchant asked his price and he named it. The merchant informed him that he could buy from Mr. B. at a lower figure, and generally this was the case, though not always. Mr. A. then offered to sell a trifle under Mr. B., and closed a sale. Mr. C. then undersold both of them, and, like the story of the little fleas, this continued "*ad infinitum*" until the price reached a level below the cost of production. I found men selling honey in three, five, and ten pound packages at practically the same price they were getting for it in sixty-pound cans. Others were disposing of from five to ten gallons at the same price for which it was being shipped in carload lots. It is passing strange that men with intelligence enough to raise bees and harvest a crop of honey should show such a lack of common sense in disposing of it.

This season, with the outside market "shot to pieces," and times not up to normal, I marketed my entire crop, amounting to nearly seventeen thousand pounds, at a reasonable figure, and not a pound of it went outside my home state. I have orders on file now which will take probably half my coming crop. Of course it takes time, patience, hard work, and good judgment; but it can be done by others as well as myself. I set my price and sell at my price, or do not sell at all. I am not unreasonable. I ask only a fair price; and when I cannot get a price for my crop which pays me for my time and labor spent in raising it I shall quit the business.

Now lastly, and most important of all, if you wish to make a success of home marketing, *protect your home merchant.* In the city which I mentioned above, the merchant complained that their sales were very slow, and honey was a drug on the market. I soon found out the reason. The beemen were peddling their wares from house to house, and selling at the very same price that they were selling to the merchants. Their wholesale and retail prices were identical. When the merchant finds out the true state of affairs, as he is sure to do in a short time, his only recourse is to put his buying

price below the beekeeper's selling price so as to make his legitimate profit. Thus the beekeeper, by making his wholesale and retail prices the same, has cut his wholesale still lower. Besides, there is no surer way of getting on a merchant's blacklist.

The plan I follow is this: I go to some of my home merchants with whom I am well acquainted, and whom I know to be shrewd, honest business men. I consult with them as to prices, find what they consider a fair retail margin, which is generally from fifteen to twenty per cent. We agree on a wholesale and retail price, and both sell at the same price. For example, I carry a ten-pound pail as one of my leaders. I wholesale it to the merchant at eighty cents, and sell to any and all wholesalers at that price unless in job-lot quantities of several hundred, when a small additional margin is allowed. The merchant retails it at one dollar. I retail it at the same, whether it is bought at my apiary or delivered to the customer's door, and I never peddle among the merchant's customers. It would be business suicide, so far as that merchant's patronage is concerned. I simply give the merchant a square deal, and invariably he returns it. I guarantee my goods to the merchant, and request him to guarantee them to the customer. I put up nothing but the best, and back it up with a "money back if not satisfied" proposition, and protect the retailer by standing good for any goods returned. During the last three years I have had only two or three pails sent back. In dealing with a



The bees had built six combs of brood and two of honey. Query: Had these bees been accustomed to an eight-frame hive?

business man a pleasant, courteous, business-like manner, coupled with honest dealing and fair treatment, will gain you a friend and hold a customer.

Glendale, Ariz.

ANOTHER FRESH-AIR COLONY

BY IONA FOWLS

We learned the other day of a very progressive colony of bees that have evidently been influenced by the fresh-air agitation, for they have taken up their abode outdoors with the apparent intention of staying all winter. We took a 28-mile drive to hunt them up. We found them located near the river on a farm between Wakeman and Birmingham. They were suspended at the end of a long limb hang-

ing out over a very steep bank so that we had a rather exciting time getting their picture.

At first all we saw was a large cluster of bees; but by smoking them back we finally exposed the combs to view and found they had built two good combs of honey and six of brood, the combs being arranged exactly parallel to each other, and very nicely spaced.

Oberlin, Ohio, Sept. 18.

A PRECAUTION WHICH IS GENERALLY OVERLOOKED

BY B. KEEP

It is surprising that the simplest thing is overlooked so often. The best conditions for wintering are so varied and so much in dispute that no trustworthy rule can be es-

tablished. One person claims best results by packing so warmly, regardless of expense, as to have no trouble with condensed moisture; another puts his faith in upward

ventilation and absorbents; another says, "Let them take their chance *à la Nature*."

But, to consider actual conditions, it is next to impossible to avoid condensation, at least to some extent, and the absorption of condensed moisture by the hive walls and cover is ruinous to a degree. Another prevents this most effectually by coating those surfaces with melted paraffin, and then, to get rid of the water of condensation in the quickest way, tips his hives forward during winter by putting two or more inch blocks under the back end. This position in winter is beneficial in two ways at least. It

brings the entrance into a position which is less exposed, and it positively prevents snow water and rain from running in. And—most important of all—the condensation on the under side of the cover clings to it long enough to run to the lowest (front) end before it drips. The bee cluster is thus saved a fatal wetting.

Many beekeepers to whom I have suggested this have said, "Why, I never thought of that!" Just another case of the simplest thing overlooked. It is said, "The world is made up of small things"—and beekeeping no less.

Lyndhurst, N. J.

AN INTERESTING DIARY RECORD OF WEATHER CONDITIONS IN WASHINGTON

BY A. M'CULLEY

Several times I have been tempted to mention instances of bees flying with the thermometer standing at 18 above, but have refrained from doing so as some would ask what I had been drinking. This is a queer country. The following readings were taken in the morning when I got up. Perhaps before noon there would be from ten to thirty degrees' difference in temperature.

Oct. 26, 1904, first frost; Nov. 13, 2:30 p. m., rain; Nov. 14, wind a gale. Rain hard 15th and 16th. Dec. 31, beautiful sunshine; air chilly.

Feb. 4, 1905, beautiful weather; thermometer 28 above; 8, 9, 10, 13 to 20, ther. 15 above. Feb. 21, very warm. March 20, 21, 25, rain, cold; 29, sunshine; warm. May 6, caught a swarm of bees. Nov. 28, first snow; 29, snow all gone.

March 10, 1906, commenced to get cold. March 12, cold—ther. 28 to 26 degrees above. March 15, ther. 10 above. Dec. 30, first snow today.

Jan. 14, 1907, ther. 2 above. Feb. 10, warm, pleasant; drones flying. April 22, frost; ther. 32. Bees swarmed today. Dec. 1, cut a tree for bees; bees 210 feet high; ther. 64; tree 7 feet through.

Jan. 5, 1908, bees flying. Jan. 23, ther. 54 in shade. Dec. 26, bees flying as in summer.

Feb. 2, quite warm and pleasant. Bees had a good fly March 4 to 8; lots of brood. March 9, 1908, bees flying as in summer. March 20, first swallows. Sept. 25, frost, very heavy; no damage. Nov. 3 to 8, very warm; ther. 64 in shade; bees carrying pollen. Nov. 15, 19, 23, bees carrying pollen. Dec. 1, 2, 3, ther. 28 to 26 above; bees flying. Dec. 13, 17, ther. 28, bees flying; Dec. 18, ther. 16.

Jan. 4, 1909, first snow; Jan. 5, ther. 8 above; 5 inches of snow. Jan. 9, ther. 2 above; 11 to 14, ther. 1 above; river frozen over. Feb. 10, 11, ther. 29 above; bees flying. Feb. 18, very warm. Nov. 13, first frost, ther. 30. Nov. 14, 15, ther. 18 above; Nov. 18, 20, ther. 55. Dec. 4, 5, ther. 22 to 18; no wind; a little snow. Dec. 28, snow and wind, blizzard.

Jan. 2, 1910, clear and cold; ther. 10 above. Jan. 6 to 10, rain; ther. 22; a few flakes of snow. Jan. 14, warm; ther. 40; bees had a good fly. Jan. 20, freezing; ther. 28. Jan. 22, ther. 50; bees flying as in summer. Feb. 1, ther. 28 to 32, cold. Feb. 6, 7, bees flying as in summer. Feb. 8 to 10, warm; ther. 48 in shade; bees flying, carrying pollen. Feb. 16, 17, ther. 16; 6½ inches of snow. Feb. 21, ther. 20; snow, cold; ground just covered with snow. Feb. 23, ther. 28; snow 4 inches; rain. Feb. 24, rain; ther. 36. Feb. 26, ther. 38. Feb. 27, ther. 42. March 2 to 10, warm wind; ther. 48. March 10, ther. 60; bees heavy with pollen. March 12, ther. 60 in shade; wind from north. March 16, warm; ther. 64 in shade. March 26, ther. 28. April 5, rain; ther. 42. April 4, first swallows today. April 14, ther. 42 in shade at 8 a.m.; 9:30, 72 in sun. April 18, no fire in office; ther. 72 in shade. Sept. 10, heavy white frost this morning; froze hard in some places. Dec. 30, first snow, 1¼ inches; ther. 28.

Jan. 3, 1911, snow gone. Jan. 5, ther. 41. Jan. 9, 10, 11, snow; ther. 26 above. Jan. 12, 13, 14, ther. 18, 8, and 22; snow heavy; sunshine at the same time. Jan. 15, 16, 17, ther. 12, 38, 34; rain. Jan. 27 to 29, ther. 28; foggy. Jan. 34, ther. 34; bees flying. Feb. 2, ther. 18 above. Feb. 8 to 11, ther. 48; bees flying as in summer,

very strong. Feb. 20, foggy morning, sunshine afternoon; ther. 38 to 44; bees carrying pollen. Feb. 23, ther. 44; rain, snow, wind, all at the same time. Feb. 24, 25, 26, 27, ther. 20 in shade, 64 in sun; bees carrying pollen. March 2, 3, 4, ther. 32 to 72. March 12, 18, ther. 34 and 26; March 23, high wind, 40 miles per hour from southwest. April 1, ther. 38. April 5, white frost; ther. 28. April 11, 12, three inches of snow. April 13, frost. June 19, 20, white frost; no damage. Oct. 1, went above Evans, 7 miles; got a swarm of bees hanging on a log—small colony. Nov. 10, 11, snow $5\frac{1}{2}$ inches. Nov. 11, ther. 8 above. Nov. 13, rain, thaw. Nov. 27, bees carrying pollen. Dec. 1, bees flying nicely; ther. 42. Dec. 30, 31, snow $5\frac{1}{2}$ inches.

Jan. 1, 1912, clear and cold. Jan. 14, ther. 48; bees flying almost like swarming; very strong. Jan. 18, 19, warm, bees flying as in summer; ther. 45. Jan. 20, bees flying; very warm like summer; willows bloom; dandelion bloom. Jan. 28, 29, ther. 50 to 62; bees flying as in summer. Feb. 11, 12, ther. 54; bees carrying pollen; good. March 8, ther. 78 in sun; wind from north; cool. Dec. 12, a light spit of snow.

Jan. 6, 1913, 8 inches of snow; ther. 28. Jan. 17, rain; snow going. Jan. 18, snowing hard; ther. 28. Jan. 19, ther. 10 above. Jan. 23, rain; no snow. Jan. 24, 25, bees flying; ther. 44. Feb. 6, 7, ther. 40. Feb. 23, ther. 20 at 8 A. M. March 1, ther. 40; bees flying as in summer. March 11, 13, heavy thunder; ther. 28. March 18, snow falling; ther. 30. March 19, ther. 26; three inches of snow. March 20, ther. 18; some snow. March 24, 25, snow; ther. 20 to 26. March 27, cloudy; ther. 50. March 30, 31, ther. 58. April 7, first swallow; ther. 38. April 8, white frost. April 10, ther. 72. April 11, ther. 110 in sun, 92 on wall in shade. April 11, evening, rain; cooler. April 27, ther. 62 in shade. May 4, frost; ther. 32. May 10, 11, warm; rain; ther. 76 in shade. Oct. 7, 8, 9, ther. 40. Oct. 13, some thunder; ther. 28. Oct. 21, ther. 50. Oct. 28, ther. 22. Nov. 14, ther. 26. Dec. 1, 2, 3, 4, cold foggy; ther. 28. Dec. 15, 16, ther. 50; barometer fair. Dec. 21, ther. 26.

Jan. 11, 1914, ther. 40. Jan. 22, light snow. Jan. 24, ther. 26; snowing heavy; 27, snow 2 inches; ther. 20. Feb. 4, ther. 18. Feb. 5, 6, ther. 28 to 30; bees flying.

Snohomish, Wash.

THE RESULT OF THE SEASON IN NORTH VERMONT

BY JEAN WHITE

Bees in the northern part of the state have not done much this season. They wintered very unevenly, some losing all or nearly all, some half, and some losing none. One farmer with a few colonies left one out without extra covering of any kind in a single-walled hive. It was a late swarm from 1914, with seemingly but little to winter on. We had but little snow, so this did not protect the hives, yet this swarm was alive and frisky enough so that it swarmed twice this summer. The other hives in the house-cellar also wintered well.

One neighbor less than half a mile away lost all in the house cellar with dysentery. Another within a third of a mile lost, out of some thirty colonies put in the house cellar, all but sixteen. Another, a mile away, put in five and wintered them all; while another with five in a bee-house lost all but one, and this was weak. This colony did not swarm this season, but finished a nice super of honey, and has the body full of brood and honey.

Bees in my neighborhood swarmed very freely, and have done no work, to amount to anything, in the supers. I tried artificial

swarming by raising a frame of brood with the queen, over the main hive, and separating when she had several empty combs filled with eggs and brood. This left the workers with the old hive and new queen and full of bees, but they did nothing in the supers until after the clover flow was over in August. The new hive is full of bees, brood, and honey; but even the outside frame of a ten-frame hive has bee-bread and some brood in it, so they have plainly fixed it so I can't extract any honey without destroying some of their numerous family. They did not swarm, however, so the two colonies are very strong. The spring until June 20 was cold and dry; but the pastures were white with the low white clover. My own theory of lack of surplus is that many field bees never got back to the hive when the winds were high and cold, and so the force was not large enough to gather a surplus. Since that time it has been wet and warm. I tried to feed my bees after haying time, but they refused it, so of course they were getting all they needed of something they liked better.

Last year at the close of haying all the

bees within a mile went on a rampage. They hung around the house doors and windows, robbed out weak colonies, and were a nuisance generally. I tried to feed; but the hives with empty bodies on, and food in these, were black with robbers from a neighbor's apiary trying to get the syrup. The berries were covered with them—as many, sometimes, as three on one raspberry. This year there are no bees in the berry-patch at all. Last year many berries were sucked as dry as though dried by artificial heat; this year there are no such berries, and no bees there other than now and then a little yellow wasp.

It seems that the bees must go into winter quarters in the best of condition; but our profits for honey this year are small. There are no large apiaries in the north of the state, and most of those who keep them allow them to swarm naturally. I am thinking that next season I will remove a frame or two of brood and the old queen from the hives as a nucleus for a new swarm, and introduce a young queen to the parent hive without waiting for them to raise one themselves, and see how that works. I am also minded to try the Pearce method with one hive, except that I shall not put them in a window but leave them on their stand.

Unlike most people who handle bees I have never used a smoker. I often open the top of my hives without gloves or veil; but if I plan to handle frames I put on both; and by moving quietly they do not get much excited. All through the spring they do not seem to resent being handled at all, especially if I have been feeding them; but later, when they have stores of

new honey that must be disturbed, they are somewhat indignant, but nothing fierce after all. I think I have a very gentle race of bees, however, because those I had some time ago were much more difficult to handle, and I tried a smoker; but the smoker bothered me more than it quieted the bees, and so I discarded it altogether.

I have been putting starters in some frames. I had no foundation, and could not wait to send for any; so I took some empty worker comb and cut strips $1\frac{1}{2}$ inches wide, and fitted these into the frames and tied them in snugly. The bees seem to like this very much. They fastened it, then cut out the string, carried it out of the hive, and are busily building more comb. I think that next time I will fasten it to the frame with beeswax and rosin, and save them the trouble of gnawing off the strings.

We are told that it does not pay to make our own hives; yet that is just my plan for another year. Our supplies have to come several hundred miles, and the freight on a five-hive lot is considerable. They must be nailed together and painted anyhow, unless one feels able to buy them all ready, which makes them cost high. I will have the bodies, supers, tops, and bottoms sawed from lumber here, and will send for the inside fittings. There is about twelve feet of lumber in a body, super, etc. Lumber is about two cents a foot undressed. If properly cut, it will be no more work to set it up than to set up those I buy. The saving will be the greatest cost, and this will not be heavy in this locality. May be I am counting my chickens unhatched—anyhow, I will tell you by and by how I come out.

Glover, Vt.

SEPTEMBER SWARMS

BY H. M. LEACH

The past season has been the most remarkable I have ever known. During June, July, and August, only a small amount of honey was stored; but, beginning with the last week of August, and so far this month, my bees have stored many pounds of fine light-colored honey. One colony in ten days filled and capped a 32-section super. Now, what has interested me most, and seemed unusual, is the swarming.

Some of my colonies cast large swarms as early as May 17, and during the first and second week of September they have cast large swarms again. The new swarms are doing well. What would cause them to start

swarming in September when they were furnished plenty of room to work? Some of my neighbors have had the same experience with swarming this month. My last swarm came Sept. 16. It was a large strong swarm, and is getting along well. From my six largest colonies I shall get 500 pounds extracted and comb honey, and all made since August 20. No dark honey has been stored in supers.

I have had bees swarm but once before in September, and that was twenty years ago.

Hiram, O., Sept. 20.

[See editorial last issue.—ED.]

Heads of Grain from Different Fields



The Backlot Buzzer

BY J. H. DONAHAY

With one glance at the outside of a hive, an expert beekeeper can tell what is going on within, but in goldenrod season he don't need to look at all. He just smells 'em.

Why Packing Material or Absorbents Become Wet

I am especially anxious to get some advice from you relative to a point involved in wintering bees. Some of my hives are single-walled, some double-walled. Heretofore I have, when putting them in shape for winter (I winter on summer stands) placed three or four small sticks, each about the size of a corncob, crosswise directly on top of the brood-frames. Over this I put a piece of burlap. Then I put on a super, filling it with sawdust or shavings. In the case of the double-walled hives this material would be dry in the spring. In the case of nearly all the single-walled hives the contents of the super just above the brood-frames were wet in the spring. On the single-walled hives I put a covering of newspapers (that is, on the sides), and over all I put a sort of jacket of tar paper. I have wondered if at least, in the case of the single-walled hives, I should put a super cover directly over the frames instead of the burlap.

Bees in this section of the country have been unusually cross this year. There has been much complaint. Can you suggest any reason for this?

A farmer has complained to me about his bees hanging around his barn a great deal. I told him that I would look into the matter. I can think of no odor that would attract them there. Perhaps you can give a possible explanation.

Chadron, Neb., Sept. 11.

E. P. WILSON.

[We are not surprised at your experience. When the packing material is too scant in amount there will be a great deal of condensation inside of the hive. This naturally passes upward, making the packing damp; and when the weather is severely cold this damp packing will freeze. It is then worse than no protection at all. When single-walled hives are used there should be a sealed cover between the packing and the colony. If double-walled hives are in use, there should be a sealed cover unless the packing material is very abundant on top and sides—not less than six inches on sides and ends nor less than ten inches on top. Under such conditions Dr. Phillips says it will not make very much difference whether a plain board or a porous cover is used over the brood-nest. The general practice, however, when packing is ample, anywhere from six to ten inches, is to use the absorbent plan. But when so used there must be a space over the top of the packing, leaving room for the free circulation of air through ventilating holes in the cover at the ends. When a sealed cover is used these ventilators are not needed. We would advise you to use a super cover on your single-walled hives, wrapped in paper, and possibly a sealed cover for double-walled hives. If the packing material is less than ten inches on top, and three inches on the sides and ends, we would use a super cover.]

Some seasons bees are much crosser than at others. They will be very cross when the flow is intermittent, especially if it comes on heavily and shuts off during the middle hours of the day. This is one reason why bees are so cross during a buckwheat flow. They are also cross when they work on honey-dew. The dews of the morning soften the saccharine matter on the leaves, and then the bees work on it at a furious rate. As soon as the sun dries up this sticky stuff the bees stop their work, and then they are cross—awfully so. Sometimes the honey-flow is intermittent on clover, basswood, the goldenrods, and the asters. When the yield stops suddenly on account of rain or cold, the bees will become cross. Chilly weather is apt to make bees cross at any time.

When bees frequent barns or stables they are undoubtedly in quest of artificial pollen which they obtain from the bran or meal in the chopped feed given to the cows or chickens. They may be quite troublesome at such times; but as soon as natural pollen is available they will immediately drop the artificial product.—ED.]

Requeening with Queen-cells Not Satisfactory; Difficulty of Raising Cells where there has been European Foul Brood

Having read so much about requeening by using ripe queen-cells I attempted to requeen a number of colonies by that method this season; but only about one queen out of each dozen reached laying age. At first I used cells from which the queens were ready to emerge; but after reading Mr. Doolittle's definition of a ripe queen-cell, which he says is a cell from which the queen is to emerge in from 20 to 30 hours, I thought that my trouble lay there; but after trying a number of cells of that age I could do no better. Very rarely were the cells destroyed; but the virgins disappeared, and the colonies tried to rear queens of their own brood. It did not seem to make any difference whether the colony was Italian or black. The colonies which were hopelessly queenless did better, but not satisfactorily.

I have been having quite a fight with European foul brood, and have found that in colonies where there has been any of the disease during the season

it is almost impossible to rear queens artificially, for the larvae almost always die. Even in colonies that showed no trace of the disease among other brood, it would develop in the queen-cells. The giving of Italian queens after keeping the colonies queenless for ten days or longer removed all traces of the disease among worker and drone brood in all but two colonies, and these were not very strong when the queens were introduced; so the queens were removed and brood given from healthy colonies from which they succeeded in raising queens, and there are no traces of disease among them since the young queens have begun laying.

I tried the McEvoy plan of treatment at first, but found it useless, as the bees were all blacks. It did succeed, however, with an isolated colony of a neighbor, though they were almost if not quite pure Italians.

Tangent, Ore., Sept. 23.

H. E. WEISNER.

[Your difficulty in requeening by the use of ripe queen-cells is rather unusual. We don't know how to account for it unless it was the peculiar season we have been having of rainy, cool, and chilly weather. Our own queen-rearing operations early in the summer were greatly handicapped, and we attribute it to the bad weather. During bad days many virgins would get lost—at least a much larger percentage than usual would fail to mate.

We have not heard of cases before where the larvae in queen-cells would die in colonies where there had previously been European foul brood. Have others had a similar experience? It would look as if European foul brood could be in a colony and not show itself in the worker brood.—ED.]

Well-known Beekeeper Loses Hand in Circular Saw

Dear Mr. Root:—I fell on a circular saw yesterday, and cut off all my fingers and the thumb of my left hand, and I want you to help me in my trouble. You must have among your fifty thousand readers some beekeepers who are or have been in the same predicament as myself, and who can, perhaps, suggest some attachment that I can get made to put on the palm of my hand to enable me to pull combs out of the hives and carry on my business as a beekeeper. I can hear of no artificial fingers here, although I am told I can get an artificial hand if I have mine cut off at the wrist. If any one can make any suggestions, will he kindly come along and thus help a brother beekeeper who has a large business to attend to, and a large family to maintain?

MAJOR SHALLARD.

South Woodburn, N. S. W., Australia, Aug. 17.

[If any of our readers can suggest anything we are sure that our friend would appreciate it if they would communicate with him direct. It is fortunate indeed that it is the left hand and not the right.

Mr. Shallard is greatly worried, of course. The accident took place Aug. 16. With the spring in Australia opening about Sept. 1, it is not hard to realize that such a handicap is indeed serious.—ED.]

No Trouble in Wintering

It has been our practice for the past few years to winter the extracting-supers on the hives. Some are placed above and some below as the case may be. Our plan is to extract during midsummer, and place the supers back on the hives, with the usual queen-excluder between.

During the fall, after the aster flow, we examine all hives for winter stores, and test by weight. Those found with just sufficient stores, or a little more, are merely left alone, after removing the excluder, giving the queen access to the twenty frames.

The honey will be found partly in all of the frames, both above and below; so if we extracted the upper set, we would have to feed back into the lower to have sufficient stores.

Those found with most of the stores in the lower are sometimes simply reversed. Entrances are closed down with the usual stick furnished with bottom-boards, and about 6 x 1/4-inch opening, which effectually excludes mice. We are never troubled with robbers. When the bees are wintering in the upper super the lower stores are generally sealed, and do not give off sufficient odor to attract. Besides, it is cold and dark on bright days in the lower brood-bodies, and strange bees do not readily enter. And then, again, when it is sufficiently warm the occupants of the hives are down on deck and on guard.

We find in the double hives that the bees do not come out as often as those in a single body, and, furthermore, breed up quicker and stronger in the spring. The frames are protected from moths, which is another advantage. Some of these twenty-frame hives are shaken down the following early summer and used for comb honey. Others, again, are run for extracted after locating the queen and placing that super below, with the queen-excluder between. We winter on the summer stands, and never have any trouble with aster stores.

Cincinnati, Ohio.

J. E. ROEBLING.

Empty Super under Colonies Wintered in a Cellar

Last fall I put ten-frame hive-bodies full of honey over five very strong colonies. The bees worked up into the upper hive-bodies. Very few bees died. I put an empty super under a strong colony and another empty super under a weak colony to observe the effect. Less than a hundred bees died in either colony. All the hives are set on bottom-boards two inches deep with screen in front. The temperature of the cellar where they are kept was from 42 to 50 degrees. The hygrometer showed moisture from 20 to 60. The cellar is ventilated by a chimney, and has a cement bottom in which is a spring of water covered by a plank. I used a fire in a wood-burning stove occasionally, to dry excess moisture. I wintered thirty colonies and lost none. I shall put empty supers under all my colonies this fall.

Plymouth, N. H.

GEO. W. DOLLOFF.

Home-made Mittens

On page 527, July 1, Grace Allen asks, "Shall we wear gloves?" This reminds me that when I began handling bees I did not use either gloves or mittens; but as I sometimes got my hands so badly stung I soon decided to change. For years I have used mittens which my wife makes of medium-weight bed-ticking, with the ticking cut so as to make the part for the fore finger like the fore finger of a glove. The wrist is made flaring, and is about six inches long so as to come up over the sleeve of whatever garment is worn. If such mittens are made to fit neatly they will be quite satisfactory—at least I have so found them.

Huntington, Ind.

J. W. SOUTHWOOD.

What would the Coroner Decide?

Who can describe the appearance of a larva that died from arsenical poisoning as distinguished from a larva dead from pickled brood, chilled brood, or some other familiar cause?

One consolation to those of us who find our bees on starvation rations now when there normally would be a surplus in the supers is that this is great weather for producing white clover for next year's crop.

BENJAMIN F. KIRK.

Can Honey with a Coal-oil Flavor be Safely Fed to Bees?

Have you had the experience of feeding bees "coal-oil flavor" extracted honey, or has the matter ever been called to your attention as to whether or not it is harmful to the bees? In a carload of honey that we recently unloaded there were over 20 cans that taste and smell of coal oil, oil-cans having apparently been used without being freed from traces of oil. If not harmful to the bees, we can use it for feeding purposes after boiling, to make sure that there is no foul brood as a result, in which event we wish to settle with the shipper in full, as he is a good customer of ours.

Ogden, Utah, Sept. 29.

F. W. REDFIELD.

[We have never had any experience in feeding bees honey having "coal-oil flavor." Something would depend on the amount of coal oil in the honey. If it merely smells of the fluid and tastes of it slightly we would not think it would do any harm, especially if you boiled it to sterilize it from any possible infection. While, of course, the kerosene flavor would ruin it for human consumption we see no reason why it could not be used for the bees.]

If any of our readers have had any experience we hope they will send it to GLEANINGS.

Incidentally this shows the folly of using second-hand kerosene oil-cans that have not been thoroughly cleaned and aired. They are always dangerous to use.—ED.]

A Swarm from a Colony Packed for Winter!

The weather here has been very unsettled. Expecting an early fall, I fed most of my colonies and packed them for winter.

In the last ten days conditions have changed so materially that I received from one of my colonies, which had been packed for winter, a prime swarm. This has never occurred before in my experience of twenty-five years with bees. White clover at this time is still blooming, but I do not think that there is much nectar secured.

It would gladden the heart of any beekeeper to see, as far as the eye can reach, our solid sea of gold—the Spanish needle. Bees are working on it from early morning until the blossoms close at sundown.

Our colonies that have been put away for winter were very weak in stores, and I fed them. This expense I could have saved if I had known the weather would change so favorably. The thermometer has been between 70 and 80 every day.

Strafford, Mo., Sept. 8.

T. SCHARFF.

Kootenay Beekeepers' Meet

The first annual meeting of the Kootenay Beekeepers' Association was held at the City Hall, Nelson, on Friday, Sept. 24, the last day of the Nelson Fruit Fair, at which there was a representative attendance of members from Nelson and the surrounding districts. The report is as follows:

The Association, organized in September, 1914, is the first beekeepers' association to be formed in British Columbia. Seventy-eight members have been enrolled. Unfortunately the past season has not been a good one for honey production in this section of the Province. Exceptionally fine and warm weather prevailed during March and April, when the bees went ahead and promised well; but the three following months—May, June, and July, were excessively wet and cold. Consequently the clover on which we mainly depend for our surplus honey crop yielded but very little nectar.

The honey that has been taken is much darker in color than usual. In many instances colonies were actually starving in June, and would have succumbed had they not been fed with sugar syrup.

The honey-label adopted by the association for the use of the members, to promote uniformity in putting up honey for sale, has met with general approval, and 3825 have been sold to date.

The balance sheet, showing an excess of assets over liabilities of \$43.35, was approved.

The following officers were elected for the year ending September 30, 1916:

Hon. President, W. E. Scott, Deputy Minister of Agriculture, Victoria; President, Major-General Lord Aylmer, Queens Bay; vice-presidents, G. E. Parham, superintendent Dominion Experimental Farm, Invermere; G. Fleming, Nelson. Executive committee, J. J. Campbell, Willow Point; Mrs. Casler, Nelson; J. Hyslop, Nelson; C. G. Johnson, Nelson; W. H. Rixen, Nelson; W. J. Mohr, Nelson; J. Blinco, Creston; B. Lockwood, Fruitvale; E. Alpagh, Kaslo; R. E. Plewman, Rossland; J. H. Vestrup, Nakusp; H. W. Collins, Grand Forks; H. G. Slater, Westley; T. S. Gill, Cranbrook; G. F. Attree, Queens Bay; James Johnstone, Nelson; W. Romain, Nelson; A. E. Watts, Watsburg; Hon. secretary-treasurer, W. J. Sheppard, Nelson, Hon. auditor, T. M. Rixen, Nelson.

Great Storm in Jamaica

We had a terrific storm in this country on August 12 and 13. It began on Thursday evening of the 12th, and lasted until noon of the 13th. It has done much harm to the honey crop in this part of the country. We were expecting a good crop of honey from the soapwood-trees. The storm flogged their blossoms off and destroyed some of the bees. The banana plantations are all destroyed. This plant is one of our staple crops, yielding honey all the year round. The bees are in quite a delicate position. About half of the field bees were lost in the storm, and about one-fifth of young hives were destroyed in two of my apiaries along the banks of the river. We hope that a change will take place in this locality that the bees may get some honey.

J. U. V. MCCORMACK.

Stonyville Gayle, Jamaica, Aug. 25.

We use a carpenter's scraper to scrape honey-sections. This is a piece of steel 2 x 3 inches, with perfectly square edges. When it gets dull you can put it in a vise and sharpen with a flat file. We like it better than a knife.

Waterloo, N. Y.

MRS. J. W. BACON.

AN OLD BOOK, OR MARCUS AURELIUS AND THE BEES

BY GRACE ALLEN

From the quiet heart of an ancient book

Some old, old thoughts reached out to me;
They gripped like grave eyes with a level look,

While I wandered out to my cherry tree.
And there in the shadow-flecked, white-walled hives,
At peace with the darkness, athrill with the sun,
A myriad bees were living their lives
And winning the peace the old book won.

"Choose ever the best, my Sacred Soul!

Be true to the highest self within!

Be one with the whole, the large, wise whole!

Ah, the poise that a calm content may win!"

Through the swing of a thousand years and more
These thoughts have throbbled at the old book's
heart,

And the same mood comes with the murmur and soar
Of the brave bees doing their humble part.

A. I. Root

OUR HOMES

Editor

And these words, which I command thee this day, shall be in thy heart; and thou shalt teach them diligently unto thy children, and shalt talk of them when thou sittest in thy house, and when thou walkest by the way, and when thou liest down, and when thou risest up.—DEUT. 6:6, 7.

As I start to dictate this Home paper, I realize that a great crisis and responsibility in this month of October is resting on the people of Ohio; and not only of Ohio, but as the people of Ohio shall act and vote in this coming election (November 2) so will, at least to a great extent, the people of other states act and vote. The great and overwhelming victories in South Carolina, over two to one in favor of banishing intoxicants, is, of course, encouraging, and will help greatly the desired outcome of our work here in Ohio. The liquor people are urging that South Carolina is only sparsely settled. It has no great cities like Cleveland, Columbus, and Cincinnati; and they are urging, also, that the rural population has no just right to dictate to the people in the large cities. They are urging, also, that all of the nineteen dry states are *also* sparsely settled, with few large cities. This may, to some extent, be true; but it does not alter the fact that the burdens in the way of taxation rest on the rural people as well as on the cities—perhaps to a greater extent in some ways. They seem to forget, or purposely ignore the facts and figures just coming to light, in the way our penitentiaries and asylums are filled by the victims of the liquor habit. They forget, also, the facts and figures in regard to revenue which have been held up so much, showing that the taxes are lighter in the dry states, especially Kansas, and far lighter in prohibition towns and cities, than in the wet states and wet cities. An examination of the facts we have given you during the last few months will, I am sure, convince any candid reader of the truth of what I have just stated.*

* Since the above was dictated I find a most excellent article in the *Ladies' Home Journal* for September, written by C. R. Stelze. The article is headed: "Suppose all the saloons were closed, what would happen to the saloonkeeper?"

After giving the enormous figures the "wets" claim that would be lost, and the number of people thrown out of employment if prohibition should come, we quote as follows:

The entire argument is based upon the fallacy that, if the *liquor-dealers* fail to get the money now spent for beer and whisky, *nobody else will get it*. It is assumed that, if a man doesn't spend a dollar for "booze," he will throw that dollar into a bottomless pit, instead of using it to purchase some other commodity which will do good instead of harm, which will have a permanent value, and which will give the workmen of the country more work, more wages, and greater prosperity in every way than if the same amount of money were spent for beer and whisky.

This morning I am thinking particularly of our Sunday-schools when compared with our saloons. Saloon-keepers recognize, and always have recognized, the fact that Sunday-schools are one of the worst enemies of their traffic, and in a like manner the Sunday-schools recognize that saloons are their worst enemies; for it is recognized everywhere that the saloon-keepers would do away with Sunday-schools if they could. Not only that, they would do away with Sunday as a whole, if they could. In fact, they trample Sunday and Sunday laws under foot at every opportunity. As an illustration, let me give you a little incident. Some years ago the pastor of our church, a bright educated man—a man, in fact, who stood high before the world in matters of education and Christianity—went to a saloon-keeper in our town of Medina (of course, that was years ago) and in a courteous manner urged the saloon-keeper to comply with the law and close up his place of business on Sunday. What kind of reply do you suppose this good man, who loved God and his fellow-men, received? It was this: "I do not 'go a d—n' on your Sunday," etc. The reply showed his bad grammar as well as his lack of courtesy, and lack of care or regard as to *what* happened just so he got his nickel for drink. Yes, the reply showed, also, a lack of reverence or respect for the laws of man as well as for the laws of God; and that reply shows the lack of reverence for any laws the whole liquor party has shown from that time to this.

Now, please do not understand, dear friends, that I mean the Sunday-schools *hate* or have a *spite* against the saloon-keeper. We are enjoined to love our enemies; and the Sunday-schools, even while they recognize that the *saloons* are their enemies, have no desire to injure the *saloon-keeper* himself—only that they are trying to have him give up his damaging business and engage in something that benefits his fellow-men. While we hate the saloons, we are trying to *help* the saloon-keeper; and we are working hard and earnestly to do away with saloons and not injure the saloon-keeper, nor to fight in malice against him. Let me repeat briefly some circumstances of years ago.

Near the old farm where I was born was a little town, or perhaps I should call it four corners, where was a brewery and two saloons—at least, the two country stores sold beer. Sunday was their great day for

business; and every Sunday night they had what the folks roundabout called the "Dutch dance." The great feature of this dance was beer by the kegful, drunk by boys and girls and men and women. At the time of my conversion, at one of our church conferences I spoke of this plague-spot in our county of Medina, and declared the responsibility rested on our church to start a Sunday-school or some sort of mission work in this little town. There were quite a few smiles, I suppose because of my inexperience, for I was young then, and especially young in Christian work. Somebody suggested that I was probably just the one to open up and carry on a Sunday-school in order to correct or counteract the effect of so much iniquity. I cheerfully accepted the task, and started out. I did not suppose the people roundabout that neighborhood had any idea that I was going to attack the beer business, and I was pretty careful about touching the Sunday traffic or the Sunday dances until I had gotten the school pretty well established. It was a novelty in that region; and not only the children but the parents and grown-up people came from quite a distance around. I taught the little boys and girls to come up on the platform and repeat scripture texts; and the parents were greatly pleased to see their children show off their ability in their childlike ways in this direction. One little chick especially used to please the audience by standing up on the platform by the side of the superintendent while she sang

I am Jesus' little lamb;
Happy all the day I am.

The Sunday-school became such a success that one bright day I shall long remember the seats were all full, and the standing-room was all occupied; and as it was warm weather with the low-down windows clear up, there was a little crowd outside around each window; and you may rest assured that I left for home happy and praising God after the school was over.*

At our prayer-meeting last evening the good pastor said that no great reform was ever started without having its ups and downs. He said that sometimes the reaction is such that things go *away* down, and people lose faith. But he said if the praying men and women just have grace enough to hold on we shall soon find the ups go a little higher, and the downs not quite so low, so that real progress is being made,

* It just occurs to me that one of my plans for getting up enthusiasm in Sunday-school was by offering a pretty little text-card to every boy or girl who would get up before the school and repeat a verse. They would keep these text-cards; and when they had received a certain number the cards were exchanged for a pretty little Sunday-school book.

even at times when we become sadly discouraged. I wonder if this is not going to be true in our work of voting Ohio dry. We had one of the "downs" in our failure a year ago; and if we fail during this coming election we are surely not going down as *deep* as we did a year ago. May God help us; and now let us get back to that Sunday-school not far away from the brewery and saloon.

Sunday, as I have said, was one of the big days for selling beer; and pretty soon the man who owned the brewery began to be suspicious that this popular Sunday-school was drawing away his customers. By and by the attendance, especially among the boys and men, began to fall off; and I well remember one Sunday that, although there was a fair-sized school of girls and women, there were less than half a dozen men and boys present. I made some inquiry as to what was the cause, and one of the women informed me the brewer during the Sunday-school hour was *giving away* beer to our Sunday-school boys, and, as a consequence, my whole school of men and boys were nearly all over at the brewery. I cut short the exercises that day, and with the little prayer in my heart, "Lord, help," I started for the brewery. The boys present, and some of the girls, followed to see what would happen. Before I got there I heard the noise of revelry. I presume I felt something as Moses did when he came down from the mount with the tables of stone and found the people worshipping the golden calf. Somebody looked out of the open door and saw me coming, and out of the open *back* door the whole crowd of boys and some of the men put out on a stampede and hid in some bushes just back of the brewery. I spoke pleasantly to the manager, and asked why the whole crowd of men ran when I came in sight. He said he did not exactly know, but granted me permission to go after them. You will remember the text, "The wicked flee when no man pursueth." It was one of the favorite ones that the little girls used to repeat on that Sunday-school platform. I suppose it was a favorite text because it was short and easily remembered. Well, I went out and found a great part of my Sunday-school in the bushes. Said I, "Why, boys, why should you run when you see *me* coming? You certainly are not afraid of your old teacher, are you?"

They laughed, and hung down their heads, and finally, by a little urging, they came back into the brewery. I asked the brewer to give me permission to talk to them, and I was pretty careful of my

words, you may be sure. I think we sang a hymn they were all familiar with; but it happened so many years ago that I cannot fully remember. I *do* remember, however, asking permission to kneel in prayer; and I prayed most earnestly, not only for all my Sunday-school scholars who were present, but for the brewer himself, his wife, and for his family; and I prayed, too, that, for the *sake* of the wife and family, if for no other reason, the father might be induced to engage in some business that would be beneficial to his fellow-men instead of being harmful. Forty years ago strong drink had not made the havoc here in Ohio that it now has. When winter weather came I told the children there would be a Sunday-school every day all winter. If nobody else came I would be there alone, and there was quite a little rivalry as to who would stand by the teacher. They were, a great part of them, Germans, and they had a German name for a Sunday-school teacher, but I cannot recall it now. I think I said at that conference mentioned (in the foregoing part of this talk) that if a Sunday-school was started and kept up long enough it would do away with the liquor business in Abbeyville, especially if the liquor trade did not hold out the longest and kill the *Sunday-school*; and I never lost faith; but it took *eight long years* to starve out the brewery for lack of patronage. When the brewer quit, the two stores also gave up the traffic; and a good woman who has charge of one of the stores told me a few days ago there had never been, to their knowledge, drink of any kind sold in Abbeyville during the forty years that have gone by; and yet it was all done quietly in the line of "peace on earth and good will to men." I wonder if our Sunday-schools in Ohio are waking up to their privileges and opportunities just now. Are they recognizing the responsibility that rests on them in this crisis?

Some years ago a saloon was started on an island down in the Ohio River. They believed that, by getting off on that island, they would be outside of the pale of the law; and when the place got to be a stench for both Ohio and Kentucky, some good man or woman started a Sunday-school there; and, if I am correctly informed, like the other place mentioned, the Sunday-school came out ahead.

Now, in view of the facts given above and in these pages during the past few months, is it a possible thing that any voter in Ohio, especially one who keeps bees and reads *GLFANINGS*, will vote wet? God forbid. Not only our Sunday-schools but our

churches, our day schools, our high schools and colleges, all places of learning, our physicians (at least the progressive ones), our manufacturers, our railway companies, our penitentiaries, our asylums, our almshouses of every sort, demand a higher order of manhood and womanhood where "safety first" and "safe and sane" are the rule. All of these mentioned above are agreed in regard to the damaging effect of strong drink on humanity—even moderate drinking. Is it a possible thing, dear friends, that the bad people in Ohio, or perhaps I had better say the *bad voters*, shall outnumber the good? If the women, the mothers of our land, could be allowed to vote, there would certainly be no question; and that explains why the liquor party are fighting female suffrage tooth and nail. May God hasten the time when the mothers and fathers shall *all* have a voice in *making* and *enforcing* the laws of Ohio and of the whole United States.

THE RIGHT TO BE BORN SOBER, WITH A SOUND MIND AND A SOUND BODY."

In an address in behalf of good government, delivered at Minneapolis on August 22, ex-Congressman John J. Lentz, of Ohio, put it this way:

"We ought to concede to our babies the right to be born sober, with a sound mind and a sound body, rather than defective because of the alcoholism of their parents. They have the right to be born in an environment that will not deliver them to reform institutions in early manhood and womanhood. We quarantine against cholera and smallpox. Isn't it more important to protect our babies against alcoholism?"

My good friends, is not the above good sound common sense? and will not making Ohio dry in November go a long way toward bringing it about?

STRAWS SHOW WHICH WAY THE WIND BLOWS.

And by the way, friends, there are quite a number of straws floating about that indicate pretty surely the direction of the prevailing wind. Read the following, which I clip from the *Cleveland Plain Dealer*:

VOTES OUT ONLY SALOON; ARCADIA, OHIO VILLAGE, REFUSES TO SANCTION BAR.

FINDLAY, O., Sept. 28.—The only saloon that has been permitted to exist in Hancock County the past seven years was voted out today at Arcadia by a majority of twenty-eight. The saloon was started in that village two weeks ago, and it is said it had a rush trade from Findlay and other near-by dry points.

The saloon would have been voted out the first week of its existence, but the council would not meet to accept the petition of the dries.

You see the people there were humbugged by the "home-rule" proposition; and no doubt that one saloon did a rushing business, as we are told, until public indignation got up to such a point that the

saloon was put down and out in just two weeks; and it would have been put down and out in one week if it had not been for a wet council. Now, here are two important morals pointed out by the above straw. First, here in Ohio, at least, when we find we have made a bad bargain, let us undo that bargain as soon as possible. Second, if we find we have been so stupid as to permit a wet council to rule the town, let us get busy at once and elect dry men for such an important office.

Here is another straw floating in the right direction, which we clip from the *American Issue*:

ASHTABULA DRY AND WET.

During April, 1914, the city of Ashtabula was without saloons. That month there were 28 arrests for drunkenness. April, 1915, was the first month of the Home Rule saloons in Ashtabula, and there were 115 arrests for drunkenness.

When Ashtabula was without saloons the man who was visibly intoxicated was arrested. Now scores of such men are not arrested. The Ashtabula papers say it would be impossible for the police to arrest all the drunken men who are on the streets Saturday evenings.

One Ashtabula merchant says his business has fallen off \$10 a day since saloons are back.

Does it pay?

Still another straw. This one comes from the New York *Evening Journal* for Sept. 27.

This journal claims to be "America's greatest evening newspaper;" and I hope it is true, because of the stand that this daily takes. First they have a picture of a criminal in his cell wearing the stripes, and a bottle of whisky just over his head; and under the picture we find the following:

This picture is published to fix your attention once more on the whisky question as it affects the entire nation, not merely the inhabitants of the prisons.

Why are men allowed to manufacture and sell a drink that every doctor and every sane man recognizes as a *poison*?

Why is it any more legal to sell whisky to a drunken man than to sell a knife to a maniac or cocaine to a drug fiend?

Whisky has done and is doing a thousand times as much harm as all the drugs put together.

The man who sells a drug to another is put in jail promptly as a criminal, whereas any man can carry on openly, licensed and protected by the state, the business of selling the whisky that manufactures criminals.

By the way, we have one or more daily papers in the city of Chicago that have rejected liquor advertisements and have come out square and bold against the traffic. The above reveals, also, the fact that we have one (God grant that there may be more) in the great city of New York that defies the rum demon. Now, is it not high time that in the great city of Cleveland we have at least one daily on the dry side? When any of our readers find it, will they kindly let me know? It would be too much,

perhaps, to expect that *Cincinnati* should follow suit very soon.

THE NEW DAVIS LAW IN FLORIDA TAKING EFFECT OCT. 1.

Section 4 of this new law reads as follows:

That it shall be unlawful for any person keeping or carrying on, either by himself or another, a place where intoxicating liquors, wines, or beers are sold by retail or wholesale, to employ a minor or a female in his place of business.

We see by the *New Republic* that on Sept. 25 a delegation of 250 girls and women, employed in the liquor business in Jacksonville, called on Superintendent Crooke, of the Anti-saloon League, to see if he could help them. Mr. Crooke called a meeting of the Christian and temperance people of Jacksonville, and made arrangements for a "free employment bureau," to make it their business to find places for the women and girls thrown out of employment by the new law. This was certainly a fine illustration of practical Christianity.

We are told that these women and girls were employed in the wholesale liquor-houses in Jacksonville.

Below is a letter just received from the superintendent of the Florida Anti-saloon League:

Mr. Root:—I am very much pleased to receive a copy of your paper. Though I have never had any dealings with bees, your paper is interesting, and I have been glad to read a number of the editorials written by yourself.

I hope you will soon be in Florida to enjoy the delightful sunshine of our fall and winter months.

I enclose a copy of the Davis law which has just closed up about 200 saloons in Florida; and if the law proves to be constitutional, these saloons will remain closed, leaving only about 75 in Florida.

C. W. CROOKE, State Supt. Anti-saloon League.

Jacksonville, Fla., Oct. 5.

I think I told you that after we failed last winter in getting statewide prohibition the Davis bill was presented and carried as a means of "regulation." Below I give you just one clause of said regulation:

SEC. 8. That no gates, doors, windows, or openings of any kind shall connect the place of business of any dealer in intoxicating liquors, wines, or beer with any house or lot so as to permit ingress or egress out of such house or lot from or into such place or business; that no blinds or screens, chairs, settees, benches, or tables shall be set up or used in such place of business; that no musical, vaudeville, or other attractions shall be permitted in such place of business; that no game or games shall be permitted to be carried on in such place of business, nor shall any loitering be allowed therein; that no obscene or sensuous pictures or statuary shall be displayed in any such place of business; that throughout the night a light or lights shall be kept burning in such place of business, and no doors, blinds, curtains, shades, screens, or other things shall be allowed to prevent persons on the outside of such place of business from seeing inside thereof at all hours of the day and night, and it shall be the

duty of the proprietor of such place of business to see that this section is complied with.

No wonder the liquor men have decided that regulation, when it comes to be enacted as above, comes pretty near *annihilation*; and right here is a moral for the people of other states who are considering prohibition. If you fail to get *that*, go with all your might for regulation.

THE OUTCOME OF THE DAVIS LAW IN FLORIDA.

Today is October 9, and we have been receiving day by day cheering news in regard to law enforcement. Below is a sample of it clipped from the *New Republic*:

The Davis act has struck them and their business such a terrific blow that they are perfectly stunned by the force of it; and so hard was the fall that only 23 survive of the 147 dealers of last-year tax.

114 SALOONS CLOSED IN JACKSONVILLE ALONE.

On the morning of October 1 only 23 liquor-houses, wholesale and retail, opened their doors for business, and the sheriff declared that the law was thoroughly enforced throughout the city and county.

Of the former dealers 114 failed to open their doors. At this writing, October 2, nearly all of these have dismantled their barrooms, removed the stock of liquors, and have forever gone out of the liquor traffic.

MAKING A DESERT OF THE GREAT CITY OF CHICAGO.

For some reason, and we hope it is for a good and honest one, the mayor of Chicago declared the law should be enforced, and for once in the world, at least, the saloons should all stop business on Sunday; and on last Sunday, Oct. 3, the edict was pretty well carried out—at least the saloon-keepers made a big protest saying they could never get money enough to pay for their licenses if their best day for traffic were ruled out. On reflection, however, they evidently decided they had given themselves away, and so they turned square about, and declared they would give the good people of Chicago “enough of it.” See the following, which we clip from the *Cleveland Plain Dealer*:

WILL MAKE CITY A DESERT; CHICAGO SALOON MEN PROMISE IMPLICIT OBEDIENCE SUNDAY.

CHICAGO, Oct. 7.—The police will have little to do next Sunday in enforcing the saloon-closing order, according to word which came from the liquor interests today.

Word went forth to the 7152 saloonkeepers to “clap the lid on tight” to give Chicagoans a real taste of what the order means.

Plans were begun for a demonstration of the so-called personal-liberty element, probably a parade, Sunday. A parade of the dries, long prepared for, will be held Saturday.

Suppose it should transpire that the people of Chicago, like those over in Russia, should decide in favor of “Chicago dry” every day in the week, then what would happen?

A “TRICK OF THE TRADE.”

We clip the following from the *Ohio Farmer*:

A circular is being distributed over the state proposing that pie, cake, tobacco, and picture shows be prohibited. It is not signed, and the “drys” complain that it is the work of the “wets,” and that its object is to incite opposition to the pending prohibition movement, its authors expecting that it will be inferred that the “drys” have launched the circular.

The above reminds us of the old fable of the ass that got hold of a lion's skin, and succeeded in frightening everybody for quite a time until somebody noticed the ears of the ass sticking up where the lion's ears should have been, thus showing that the foolish animal was but an ass, no matter what his outward appearance.

SENDING BOOZE TO THE HEATHEN ON THE SAME VESSEL THAT CARRIES MISSIONARIES, ETC.

On page 822 of our issue for Oct. 1 we gave some facts in regard to liquors sent to Africa. Here is something from our friend Minnie J. Ellet, clipped from the *Ohio Messenger*:

I rarely neglect writing down at once anything I hear, or clipping or copying anything I read that shows (or proves) that for every soul we lead to Christ we *make ten drunkards*.

The new Chinese republic, careful to label all poisons, labels the drink we send “The Jesus Poison.” American consuls in more than one country forbid the missionaries organizing temperance societies because it equals “boycotting a great American industry.”

In spite of protest from thousands of Christians, Elders Wilson and Bryan sent a Chicago brewer to represent us in the Balkan states, and the *Cleveland Plain Dealer* is responsible for the statement that he brags to royalty that the shirt he wears cost twelve dollars. Doubtless the poor fellows who paid for the shirt go shirtless.

All over China agents of distillers, brewers, and cigaret-makers are giving away liberal samples of their goods—creating *appetite*.

I've misplaced an article on “Christian America's Contribution to Darkest Africa.” But the contribution of *barrels* in one week runs up in the seventh figure. In three months we unloaded 250 *tons* at one *dry* port. God forgive America's greed, if he can, but *woe* is pronounced against her.

When coffee was boosted in price, Brazilian planters wondered why Americans should kick when they buy of us beer enough to flood the Amazon River, and it costs them 5 cts. per glass. They think their coffee as valuable in dollars and life-giving properties.

Japanese drink our rum, stagger the streets, or roll in the gutters, saying, “We are Christian.”

When America took possession of the Philippines there were fewer than 20 saloons in Manila. Before 12 months had rolled by there were over 800.

GOD'S KINGDOM COMING.

We clip the following from *Farming Business* for Sept. 11:

A PROFITABLE SLUMP.

The Commissioner of Internal Revenue has recently issued a preliminary report for the fiscal year ended June 30, which contains much that is good

news. The national income from the sale of distilled and fermented liquors fell off very materially during the past year. The loss of revenue to the government may seem an unfortunate thing to some people. But the thing which it indicates will be good news of far more import to others.

The ordinary revenue collections on distilled spirits fell off practically seventeen million dollars during the twelve months. During the same time the collections of revenues on fermented liquors was approximately six million five hundred thousand dollars less than the year before. This means that the national consumption of distilled spirits for the year was fifteen million gallons less than for the year before—a decrease of one-eighth. This means that as a nation we consumed only seven-eighths as much spirituous liquors last year as we did the year before.

Would it not be a good thing if we were to keep up that decrease? If we did, at the end of another seven years we would quit consuming spirituous liquors, the greatest destroyer of wealth and personal efficiency—and even of human life—which operates in the world. Some people claim that General Sherman did not say that war was hell; but somebody started the statement, and it is a very true one, as we are learning this year. But all the wars fought in the entire world during the past century have not killed as many human lives or destroyed as much property and wealth as has the use of spirituous liquors during the same length of time. Let us keep on marking off that same internal revenue deficit each year, adding to the national and personal wealth to a far greater degree.

We also clip the following from *Farming Business*:

THE RESULTS OF PROHIBITION.

Prohibition gets results; it actually does prohibit. The best sort of proof a skeptical man could ask for was furnished the other day in the office of the board of tax equalization of Indianapolis. The representatives of the Capital City Brewing Company of that city went before the board and asked that their assessment be materially reduced. In support of their request they claimed that the spread of prohibition during the past few years has greatly reduced the value of brewing stock. The receiver for the company said that he received letters every day from breweries begging him to buy their stock and equipment at 10 cents on the dollar of their normal cost or value.

SOMETHING FURTHER FROM GOVERNOR CAPPER, OF KANSAS.

We clip the following from the *New Republic*:

The state convention of the W. C. T. U. which was held here this year gave Governor Capper the opportunity to say a few good things about prohibition in Kansas that will be heard for miles around outside the boundaries of Kansas.

The Governor has heard from various sources that the liquor interests are busy telling the people who will listen to them that conditions in Kansas under the dry *régime* are not what they ought to be. That the people are unhappy, taxes are higher, and that the *wheat* does not grow so fast since the saloons were thrown out of the state.

Governor Capper said:

"Kansas, under the enforcement of her prohibitory law, has made such marvelous advancement in every avenue of progress and well-being that the powerfully entrenched liquor interests, alarmed lest all the states, or the nation, follow its example, have made Kansas the target of their various publicity bureaus. They have covered the entire United States with pamphlets and reports in which statis-

tics are adroitly massed, manufactured, and distorted to prove that Kansas actually is damaged by prohibition, and that there can be no real prosperity, no actual progress without the saloon. One side of their argument is as convincing as the other; but the plausible and apparently conclusive and authoritative array of their alleged statistics puzzles many persons who realize at the same time that they cannot be true or entirely true.

NATIONAL PROHIBITION COMING.

"National prohibition is certain to win. Its complete victory may not come as early as many of us are hoping it will come. But no matter about that. You should keep on fighting. The enemy is strong and resourceful. In a meeting of the National Anti-saloon League two years ago \$30,000, seemingly a generous sum, was subscribed in 30 minutes to fight the liquor power. But the liquor power raised *four million dollars* with which to fight prohibition. This should not discourage us. Neither four million dollars nor four hundred million dollars can stop the onward march of prohibition in this country."

THE METHODIST CHURCH AND THE SALOON TRAFFIC.

The following, also, came to me without any indication as to what paper it was taken from:

Federal action is the only way to curb the liquor traffic, declared Dr. Clarence True Wilson, Kansas man, general secretary of the Temperance Society of the Methodist Church, at the temperance meeting of the conference sessions Saturday night.

"We must have federal prohibition imbedded in the constitution," he said. "Because the alcohol traffic is defended by inter-state commerce and operates under federal protection. The national power that stopped dueling, polygamy, piracy on the high seas, cannibalism on distant islands, unlocked the sealed gates of Japan, uprooted human slavery, drove the lotteries from Louisiana, and their advertisements from the mails, must now be invoked to defend the American home.

Dr. Wilson scored the Home Rule movement, declaring the people of the county and state had a right to determine moral conditions in the cities, and that "the pure stream of country morals and township sentiment was needed to flush out the cesspools of the cities."

The speaker had no patience with the suggestion that the liquor men be compensated for lost property rights.

"No man has a natural, inherent or constitutional right to debauch the American people," he said. He added that there was not money enough invested in the liquor business to pay a millionth part of the bill it owes civilization.

"It is time to serve notice," he concluded, "that no man can be mayor of our city, sheriff of our county, attorney for our district, represent our ward in council, go for us to the state legislature, speak for us in congress, answer for our state in the senate, or get a Christian man's vote for president, if he stands committed to the liquor interests."

Please notice the concluding sentence. If we continue to put men into office, or let them get into office, who are in sympathy with the liquor traffic, how are we going to have law-enforcement?

DON'T BE ENTRAPPED.

Perhaps there is one point the great world does not sufficiently recognize. It is this: While the liquor party are ready at

any minute to resort to any kind of trickery or falsehood in order that they may prevent their traffic from being put down and out, the temperance people, representing our churches and schools, and the highest type of truthfulness and honesty in our land, are obviously obliged to be above-board. *We* are striving to *benefit humanity*, while our opponents care for nothing but their own selfish money interests; therefore it behooves us to be wise as serpents while considering the things before us as people of Ohio. I was reminded of this by reading the following, which I clip from *Successful Farming* for October:

OHIO VOTERS, LOOK OUT!

Beware how you vote on constitutional amendments. Read them carefully and learn what they mean. For instance, the Constitutional Stability League (smooth name!) proposes that the people vote in November on this amendment:

"No amendment of the constitution shall be submitted to the electors which involves any proposal or part of any proposal which since September 4th, 1912, shall have been rejected more than once by the electors, unless six years shall have elapsed since the last rejection."

Do you see the "joker" in that? It is "or part of any proposal." Suppose woman suffrage, prohibition, tax reform, or any other good thing has been twice rejected by the voters. Suppose the enemies of these good things twice propose an amendment which in part apparently considers one of these good reforms, but so worded that the voters purposefully defeat it, don't you see that the amendment desired in its good form cannot be submitted again for six years because it contains "a part of" a "proposal" that was twice rejected.

This is a trick of the interests that do not want prohibition or woman suffrage in Ohio. You ought to know what to do to any proposed amendment like that of the Constitutional Stability League.

"THE INTERCOLLEGIATE STATESMAN."

The above is the title of a magazine now in its twelfth year. It is published by the Intercollegiate Prohibition Association, Room 303, 189 West Madison Ave., Chicago. Its object is to wake up the students of our colleges to the importance of voting out the liquor-traffic. One might readily suppose that college students would be in *advance* in making our states and nation dry; but instead of that I greatly fear it is true that they are lagging behind in the way of temperance. A few years ago there was considerable said in the papers about banquets held by students of the great eastern colleges—I am not sure whether it was Yale, Harvard, or Princeton. We read in the papers of their banquet and of the quantities of beer they drank; but I had supposed these things were matters of the past. During a very pleasant talk with Mr. Mark R. Shaw, secretary of the association mentioned above, he informed me that such things are still going on; and not only students but some well-known professors are defend-

ing not only the banquets but the beer. If this is true, may God have mercy on us as a people. Mr. Shaw, as an illustration, asked me how I could explain the fact that so many lawyers and doctors are *drinking* men. He said they acquired their drinking habits in the college where they graduated. Just thing of it, friends—fathers and mothers depriving themselves almost of the necessities of life in order to have their boys go to some celebrated college to graduate, and find out afterward that such college taught more iniquity than it did righteousness.

Since the above was in type we find the following in the *Plain Dealer*:

"COLLEGIANS, VOTE DRY." PROHIBITION LEAGUE OFFICER ADDRESSES OBERLIN STUDENTS.

OBERLIN, O., Oct. 6.—"You Ohio college students are going to help us win the state dry this fall," was the enthusiastic statement of David T. Shaw, state secretary of the National Prohibition League, in his address to the students of Oberlin this morning.

He added if Ohio could be aroused to the pitch of enthusiasm attained before some of the big football games of the year a victory for the dry forces would be assured.

ALCOHOL FOR AMMUNITION, TO RUN AUTOMOBILES, ETC.

Even if our good friends of the Cleveland *Plain Dealer* did not show much enthusiasm in announcing that South Carolina had voted dry (more than two to one), it rejoices our heart to find the following at the close of one of their editorials:

Perhaps after all the states have gone dry, and alcohol is no longer used to befuddle the intellect, we shall find that it makes fine ammunition to repel invaders. Or if war shall be abolished simultaneously with drunkenness, the arts of civilization may still be served by this hitherto destructive substance, and we shall know it only as a power to run machines. Alcohol's evil reputation may after all be like the badness of small boys—merely a case of energy wrongly directed.

DRUGSTORES AND WHISKY, ETC.; LONG LIVE DR. WILEY.

We clip the following from the Cleveland *Plain Dealer*:

WILEY REFUSED DRUG-STORE LIQUOR RULE; TRIES TO GET ORDER TO PROHIBIT DEALERS SELLING WHISKY WITHOUT LICENSE.

WASHINGTON, Oct. 6.—Efforts made by Dr. Harvey W. Wiley to get a ruling from federal officials that neither whisky nor brandy may be sold in drugstores after the new United States pharmacopeia goes into effect, today proved unsuccessful.

While the pharmacopeia is recognized as the official list of drugs for the United States, Commissioner of Internal Revenue W. H. Osborn holds that the dropping of whisky and brandy from the list of medicines does not affect the situation with reference to the sales of those intoxicants in drugstores.

At least, the federal government has no interest in that question.

After Dr. Wiley, who is president of the United States Pharmacopeial Convention, read the ruling of the commissioner, he said:

"I am still of the belief that, after the new pharmacopeia becomes effective, which will be as soon as the new book is issued some time this winter, no drugstore will have the right to sell either whisky or brandy unless a saloonkeeper's license is taken out and the druggist complies with all the local regulations of the saloonkeeper."

PROHIBITION IN FACTORIES,

We take the two clippings below from *Good Health*, Battle Creek, Mich.:

INCREASED EFFICIENCY IN STEEL WORKERS WHEN SALOONS GO.

Due to the removal of saloons from the city of Coatesville, Pa., accidents in the plant of one of the city's largest steel companies have decreased to the extent of fifty-four per cent in six months.

STOVE EMPLOYEES FORBIDDEN DRINK AT WORK.

The Baker Stove Company, of Belleville, Ill., has issued an order which makes its plant "dry." Hereafter none of its four hundred employees will be allowed to drink intoxicants of any kind while at work. The factory managers are encouraging the men to drink milk instead of beer, and are providing ice with which to keep the milk cool. "We are not posing as prohibitionists," says Mr. George Baker, superintendent of the Baker Stove Company, "but we believe we can increase the efficiency of our men and reduce the number of accidents in the shop if the men are not allowed to drink when at work."

GOOD FOR THE ILLINOIS STEEL COMPANY.

The clipping below was sent us by a friend:

"DID BOOZE EVER DO YOU ANY GOOD?"

"This question," says Dr. W. A. Evans in his "How to Keep Well" department of the Chicago *Tribune*, "is not from a long-haired or even a prohibition orator; it is part of an electric sign displayed over the gates of the Illinois Steel Company.

"It is easy to prove," continues the doctor, "that alcohol harms the ordinary cells of the body. Alcohol is a drug. Alcohol addiction is a drug habit. The abuse of this drug will go the way that drug abuse of every kind is destined to go."

When all the great factories of our land are ready to follow the Illinois Steel Co., booze will have to go.

TEMPERANCE MOTTOES USED AT THE WORLD'S TEMPERANCE SUNDAY AT THE THIRD PRESBYTERIAN CHURCH, TRENTON, N. J.

WHY SALOONS MUST GO:

Because it is the mother of all mischief.

Because it is the chief lawbreaker in the country.

Because it is the enemy of the church and good citizenship.

WHEN?

When we cease to sacrifice our children for revenue.

When Christian men become fully aroused to this evil.

When men vote as they pray.

BY WHOM?

By the prayers and labors of mothers.

By the voters who are determined to care for their sons.

By the officers who are true to their oath of office.

Two hogsheads of beer are equal to one loaf of bread in food value.

Seven millions died in battle since 500 B. C.; that many killed every year traceable to King Alcohol.

A Titanic of souls lost every day by drink in America.

The saloon will go when Christian men say so.

The mottoes used were taken from a program prepared by Mrs. Stella B. Irvine, 115 Walnut Street, Riverside, Cal.

WHISKY AND BRANDY NOT A MEDICINE; SEE P. 735, SEPT. 1.

We clip the following from the *Pennsylvania Farmer*. After you have read it, see if you cannot join with me in uttering a hearty amen.

The medicinal value of liquor is denied by our most competent medical authorities unaffected by popular opinion. Its value as a revenue-raiser is demonstrated to be a negative quantity. Its only defense is that advanced by the so-called "personal liberty" advocates. To them we would recommend the following plan suggested by a writer in a current magazine. His advice is to married men who cannot do without their drinks. He says, start a saloon in your own home. Be the only customer. You will have no license to pay. Go to your wife and give her two dollars to buy a gallon of whisky—and remember there are sixty-nine drinks in the one gallon. Buy your drinks from no one but your wife, and pay her the regular 15 cents per drink. By the time the first gallon is gone she will have \$8.35 to put in the bank and \$2 to start business again. Should you live ten years, and continue to buy booze from her, and then die with snakes in your boots, she will have money enough to bury you decently, educate your children, buy a house and lot, marry a decent man, and quit thinking about you.

We clip the following, also, from the *Pennsylvania Farmer*. If it does not voice the sentiment of all Christian people, should it not do so? Shall the art of killing people be a part of the education of our youth?

MAKING SOLDIERS OF CHILDREN.

It will be remembered that about twenty years ago there was some agitation in favor of introducing military training into the public schools and other institutions of learning. The idea died "a-bornin'," as it deserved to. It is being revived by some pseudo-patriotic people at the present time. It seems that whenever the air is impregnated with the war spirit some people lose their native good sense. But whatever may be the merits or demerits of the campaign for "preparedness," the proposition to give military training to school children is, in our opinion, foolishness in the extreme. The plea for it on the ground of its value as athletics is far-fetched, as military training is not the kind needed, nor does it serve the purpose of development in the growing youth. More than this, however, when it is stated in plain honest words, military training is for the purpose of producing efficiency in killing and destroying. To be most effective, the spirit as well as physical precision and endurance is necessary. Who will dare put the desire or even the willingness to kill in the heart of a child? Have we forgotten what the great Teacher said—"It were better that a millstone were hanged about his neck and he were drowned in the depths of the sea than that he offend one of these little ones"? Let us hear no more of this talk.

SOMETHING ABOUT THE STEERING-GEAR.

If prohibition should go through, and should prove actually to prohibit, we imagine there would not be anywhere near so many automobile accidents due to the fact that something happened to "the steering-gear."—*Ohio State Journal*.

POULTRY DEPARTMENT

Mankind neither knows of nor enjoys two greater food blessings than fresh eggs and sweet milk.—American Poultry World.

SPINELESS-CACTUS FRUIT; ALSO SPINELESS-CACTUS SLABS AS POULTRY FOOD.

Our good friend G. B. Woodberry, of Glendale, Cal., sends us two fruits, each about the size of a goose egg. I pronounced the quality about like that of a good sweet apple, and, in fact, they are rather too sweet for my taste. I suppose there are other varieties that are more tart; for instance, the fruit of the wild cactus found in Florida is, some of it, quite tart. The sweet fruit might exactly suit some people; and in regard to feeding poultry on cactus leaves or slabs, friend Woodberry sends us a clipping from the Los Angeles *Times*. This gives an account of feeding three different cages of poultry on cactus alone—no water. You see, the idea is, that the cactus supplies sufficient water of itself. You may remember that we have mentioned before that cows and pigs would get along very well without water if they have plenty of cactus. I believe the poultry in the three experiments were confined. Four pullets laid two eggs a day when fed on cactus (12¼ lbs.), and nothing else, for five days. Three sitting hens in store windows, fed only cactus (10¼ lbs.), no water, commenced laying, and gained half a pound in weight. Three pullets in a similar store window began laying, and gained 1¼ lbs. Amount of cactus consumed, 14 lbs. The account of the experiment ends with the following:

Conclusions.—Spineless forage cactus, fed to three sets of chickens for over a week, showed that those laying continued to lay, and those which had been sitting commenced to lay and gained in weight.

While the above was on only a small scale, it demonstrates that poultry can live and do tolerably well on cactus alone and nothing else. Very likely, if the experiment had been continued for a longer period the above might not be as favorable. But if it actually transpires that I can grow cactus in my garden to feed chickens, so as to get eggs without being obliged to purchase any grain at all, it would be a big achievement. If cactus alone will enable the chickens to lay eggs, and increase in weight in confinement, what would it do if the chickens had a range of two or three acres as ours have? Today is Oct. 2, and I am looking forward to the time when I can go back to my Florida garden to raise cactus for my chickens.

SOREHEAD AMONG CHICKENS.

We clip the following from the *Florida Grower*:

I wish to warn the *Grower* family of readers to the danger of "sorehead," and the necessity for preventive measures if they wish to avoid it. Now is the time to commence preventive measures. It will be too late after the trouble is upon you. Begin in July, and feed throughout the summer months the following:

One tablespoonful of sulphur to every twelve or fifteen fowls, mixed with the mash feed once a week. Alternate with epsom salts, same quantity for same number of birds, preferably mixed with a wet mash, so as to insure the birds getting it. It may be given in the drinking-water, but there is always danger of some of the birds refusing it, which is avoided when given in the wet mash. Giving the sulphur, say on Tuesdays and the epsom salts on Fridays, will save untold worry and trouble later on. The late-hatched chicks are the most susceptible to sorehead. By no means overlook them. You will save yourselves a world of trouble, as this disease is especially prevalent here in late summer and early fall; but I have yet to hear of a single case where this treatment was given in advance. Better be safe than sorry.

As a rule I am opposed to giving drugs to chickens; but epsom salts I find recommended by so many of the poultry journals I am forced to believe there is something in it. I suppose the explanation would be that sorehead is caused or at least is predisposed by indigestion; and the epsom salts would prove a sort of physic to cleanse the digestive apparatus. Sulphur is also a recognized anti-fungus. Just consider the results that are obtained by the lime-sulphur spraying used on fruits and vegetables.

COTTON-SEED MEAL FOR POULTRY, ETC.

In testing different fertilizers in our Florida garden we used quite a little cotton-seed meal with good results: and once or twice the chickens got at it and seemed to eat it with avidity. Wesley, however, assured me it would *kill* chickens. He said his former employer lost quite a lot of them by giving them cotton-seed meal; and I have heard from others down in Florida that cotton-seed meal would kill chickens. Later on I noticed that the matter was being discussed in the Florida papers. Some of our experiment stations have taken the matter up; but, as nearly as I can make out, the general conclusion seems to be that cotton-seed meal is a safe and profitable poultry food providing it is mixed with bran, corn meal, or middlings so that it will give not over one-fourth cotton-seed meal in proportion to the other feed. For small chickens I think one-tenth of cotton-seed meal has been recommended.

And, furthermore, as a matter of exceeding great importance, one periodical declares it will take the place of animal food such as ground bone, beef scrap, etc. I am going to make a test of it when I get back to our Florida home. The matter was just brought to mind by the following from the *New South Baker*, sent me by our old friend Henry Borchers, of Laredo, Texas. If oil is a recognized and wholesome article of food made from cotton-seed meal, I do not know why we should not use the meal also for making bread.

COTTON-SEED MEAL IN BREAD.

FORT WORTH, TEXAS.—The latest claim of King Cotton for favor at the hands of his own subjects of the South by home consumption is cotton-seed flour for pastry and bread, which is more properly known as "Allison flour."

G. A. Baumgarten, proprietor of the Schulenburg oil-mills, manufacturer of the flour, went to Houston with a supply of his product and turned it over to the Stude Baking Company for manufacture into bread. Forty loaves were turned out and presented to friends complimentary by Mr. Baumgarten.

The bread contained 20 per cent of Allison flour, made from the choicest upland cotton seed, and 80 per cent wheat flour. The bread was a rich light brown, with a delicious nutty flavor, and, according to Dr. G. S. Fraps, state chemist at College Station, contained as much nutriment as beef or eggs, but 21 times cheaper than eggs, and 15 times cheaper than beef.

P. S. Tilson, of the Houston laboratories, analyzed a sample of the flour and stated that it contained 64.53 protein and fat. Meats contain from 15 to 23 per cent protein, averaging about 17. Patent wheat flour has but 11.73. Cotton-seed flour has been mixed as high as 80 per cent with wheat flour; but 20 per cent is deemed sufficient, and produces the best results, at the same time containing all nutritive requirements.

CHICKENS EATING CROOKED NAILS AND BITS OF WIRE.

I am enclosing a piece of wire, as it appears to be taken from the gizzard of a chicken I dressed. It was sticking clear through the gizzard, and was completely encysted, thus protecting other organs from it. I send it because some time ago A. I. Root in his poultry notes questioned whether chickens would swallow such things. I have found needles and pins in chickens' gizzards, and I think they pick them up and swallow them in their wild hurry to eat all they can, before the others get it.

I now have two chicks that have always been fed alone, and all they can eat; but put them in a barrel of corn chop and they will crowd each other and eat just as fast as they can, as if they thought there was not enough for both.

Doniphan, Mo. MRS. J. W. BEAUCHAMP.

I think, my good friend, you have given us the key to this matter. When chickens have plenty of proper food they will be very unlikely to swallow things of this kind that may do them harm; and your letter explains why our chickens down in Florida pay no attention to crooked nails and rusty pieces of wire, and tacks, for our chickens, big and little, always have food where they can get it when they want it. I have ex-

plained before that we put all of our food in galvanized tubs set up on a post where the chickens all know just where to find it whenever they are hungry enough to jump up into the tub. When the chickens are small they have smaller tubs lower down; but just as quick as possible we teach the chickens to hop up high enough so that Florida rats cannot follow them. When they are quite small we are obliged to give them what they will eat up clean, and carefully see that they never get so *hungry* as to swallow rusty nails. Your suggestion about making chickens "greedy" would be a good plan to follow where you want to fatten up young roosters as fast as possible.

THE WET SEASON OF 1915.

Today is October 6, and rain is still coming just a little oftener than we like. We have used the sprinkling system only once, and even then it was a mistake. A shower followed us soon after, so that the sprinkling did harm rather than good. The following clipping from the *Ohio Farmer* not only describes the looks of our Ohio garden, but it portrays also the situation of many other gardens pretty much all over the North. Read the following:

My garden is so full of weeds I can hardly find my "truck," and the "truck" is so nearly drowned out that it isn't worth hunting for. My peas are a big rotten mass of vines, my roots all grow to tops, my tomatoes refuse to ripen, my sweet corn won't ear, and my vines won't set fruit.

This fall or next spring I shall fill all vacancies in my young orchard; but in the meantime I've lost the original price and a year's growth on the trees. I shall set another strawberry patch, of course, but I've lost my next summer's crop. I don't know whether I'll raise much more "truck" or not; two months of rain is slightly dampening to my enthusiasm.

Obviously, I should have raised ducks, water cress, and pond lilies exclusively; but hens seem to stand the deluge as well as anything I am trying. They have dry quarters to stay in at their own discretion; and perhaps if my vegetables could go in out of the rain when their feet get too wet they might thrive better. The production of winter eggs furnished our principal income last year, and the prospect looks much better for eggs this winter so I'm in hopes we won't "sink" entirely; but this is surely a season when a city man would better stick to his job if he has one. He might start a summer resort—he could find a lake and run a boat anywhere—but a dry season next year would be as injurious to his industry as the present one has been to ours.—E. A., Chautauqua Co., N. Y.

THE BOYS' CORN CLUBS.

The average yield of corn in Ohio is 33 bushels. The boys showed that 140 bushels could be grown on one acre. Small youngsters demonstrated that eighty and ninety bushels were easy. Ohio owes a duty to the boys who are willing to make these tests.—*Cleveland Plain Dealer*.